

The
**MOTOR
OWNER**



February 1922

One Shilling.



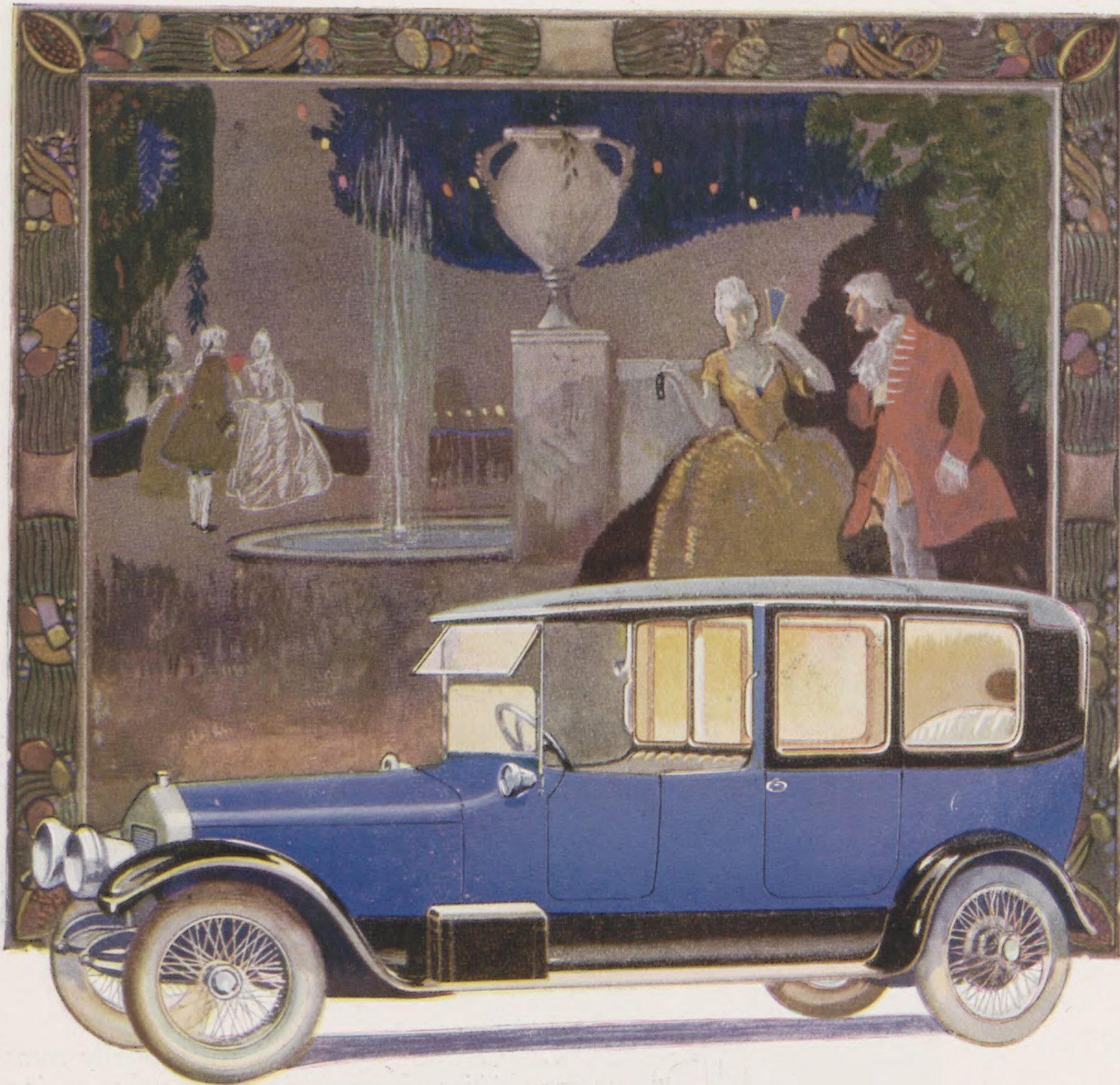
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THE most comprehensive range of modern motor carriages ever offered to the motoring public is comprised in the new Wolseley list.

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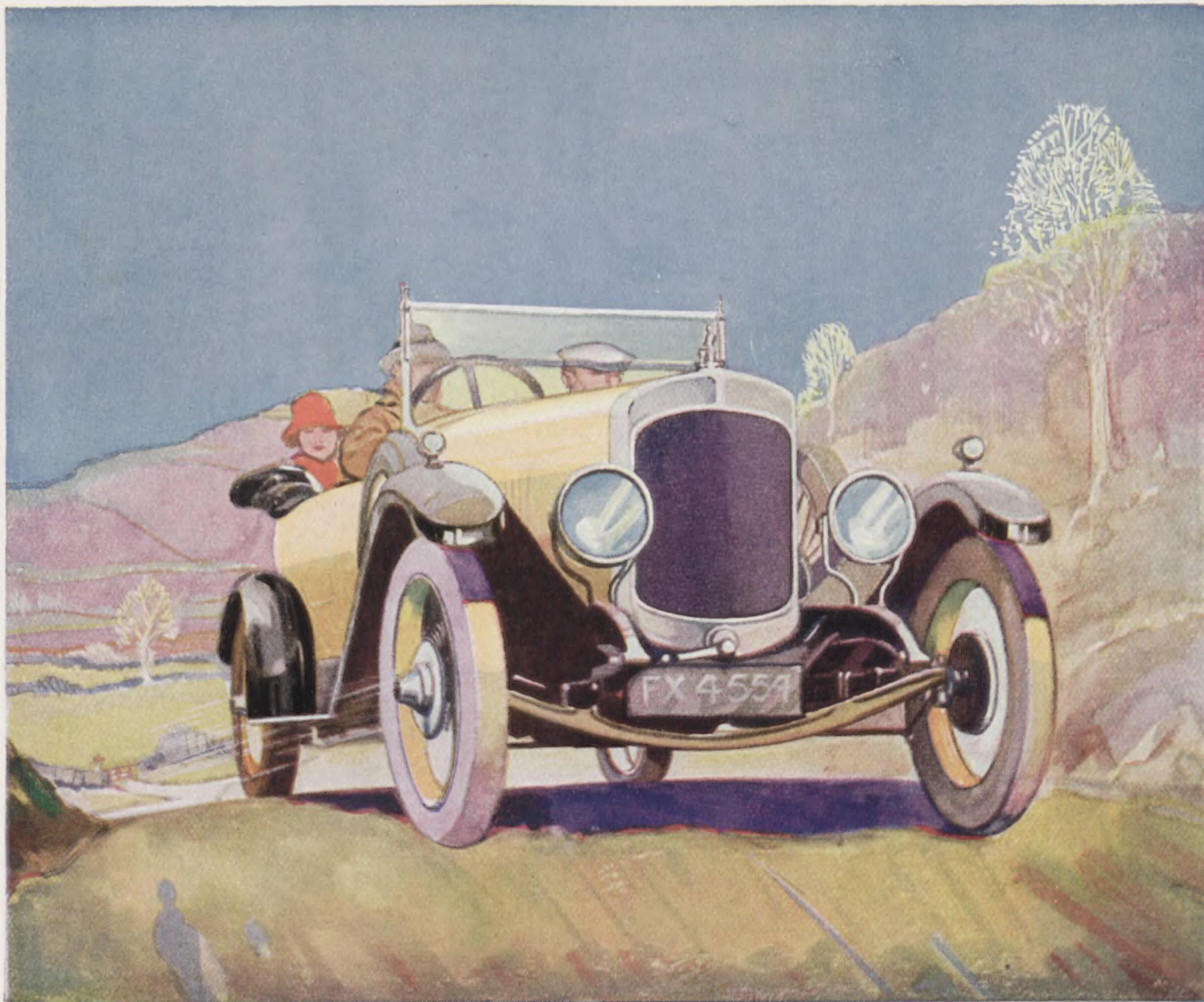
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*The 20 h.p. Vulcan
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Sports Model.
One thousand guineas.*

PERFORMANCE with distinction briefly sums up the abilities of the single-sleeve valve engine embodied in the new Vulcan "Twenty." It supplies a flexible power that surmounts the difficulties of the most hilly districts, and accelerates with a response that makes driving in crowded traffic a delight.

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A characteristic scene on the shores of the Gulf of Corinth

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*If you have been, you are going again
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*Satisfy yourself by comparing
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Four-Seater Touring
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*The equipment includes : Elec-
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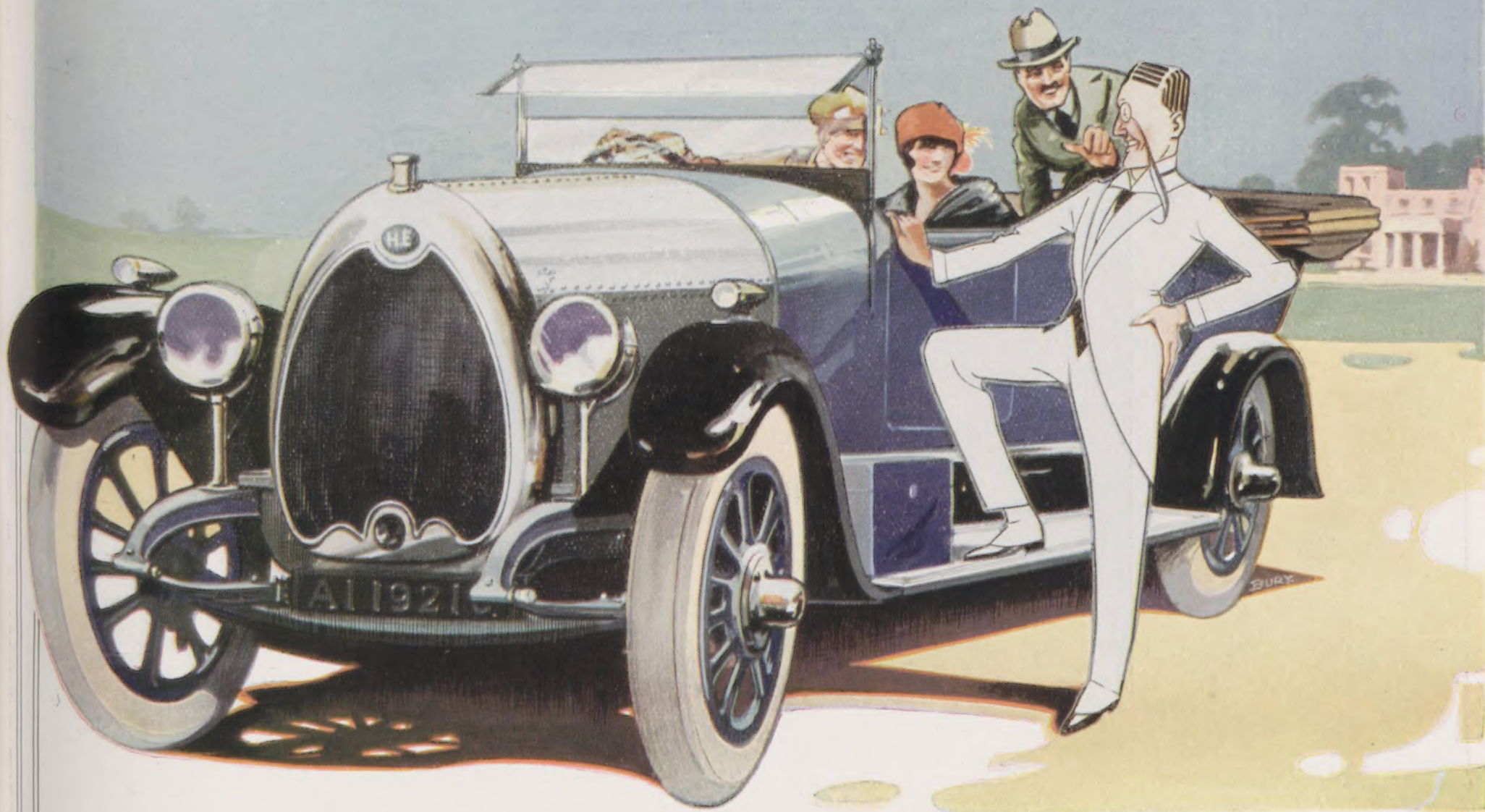
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WHAT, for instance, do you expect from your ideal Car?—ease of handling, low upkeep cost, reserve power, hill-climbing ability? All these—and more—are *proved* features of the 14-20 H.E. Car. H.E. owners say so proudly.

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Write us for name and address of the nearest Authorised Agency where Car may be seen, and ask for a copy of our new Illustrated Booklet.

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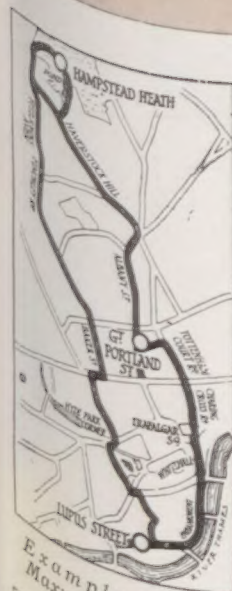
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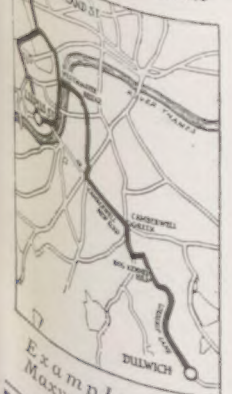
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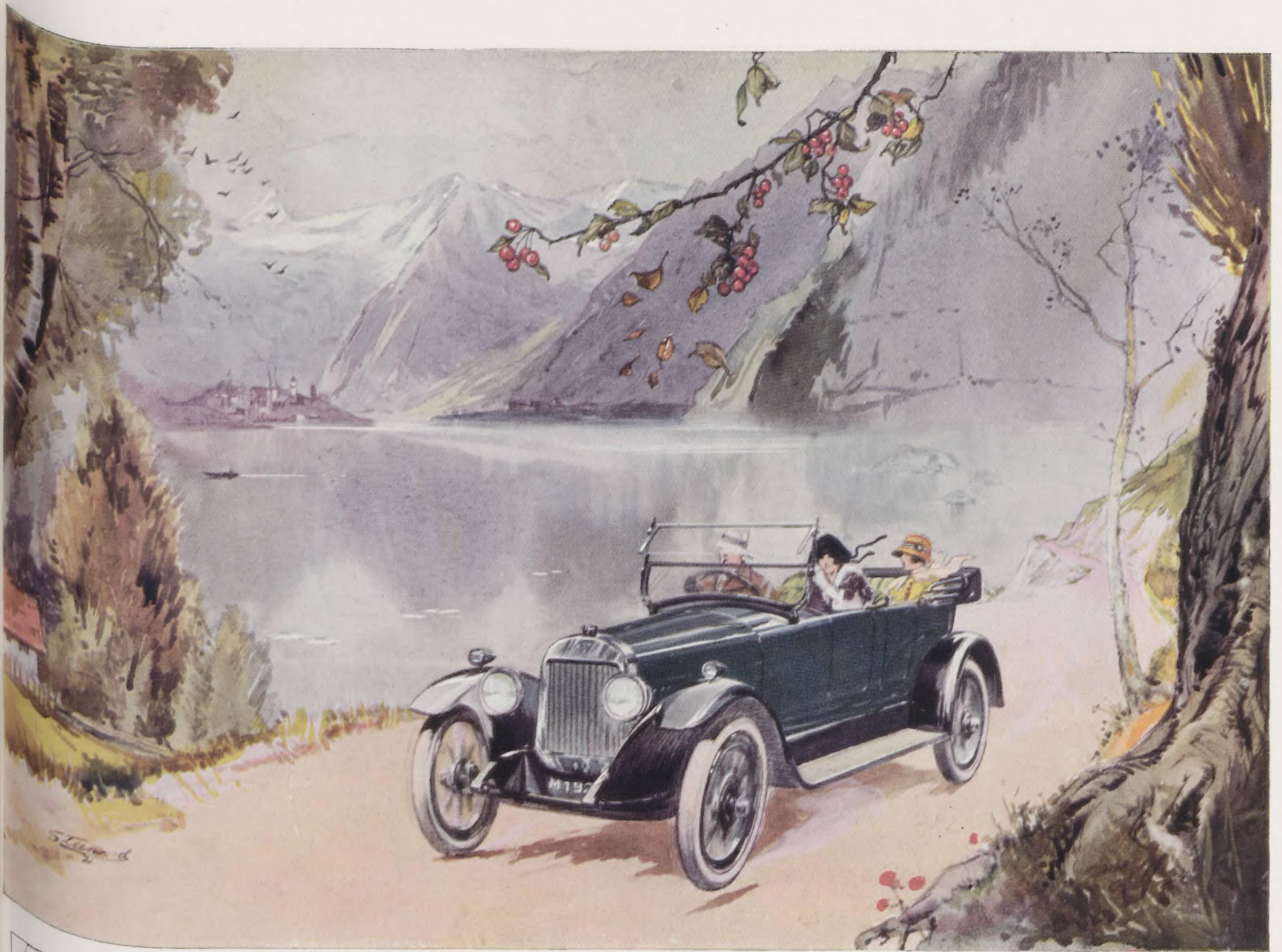
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Example of a
Maxwell Test Run



Example of a
Maxwell Test Run



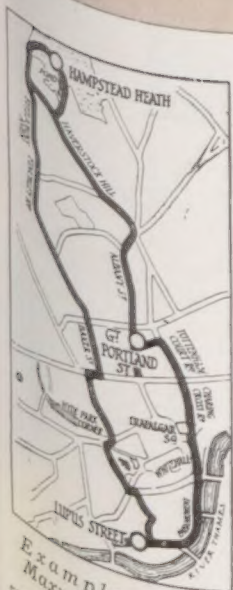
Go With **THE GOOD Maxwell** On Test

MAXWELL Service gives to the motoring public a bigger and fairer opportunity of forming its buying judgment—they can now see the good Maxwell under test and become personally acquainted with its superior worth under all conditions of road service. Four test routes have been planned, and you can choose whichever you think best. Simply notify us of your desire to go on a Maxwell test and say when you will be ready to go.

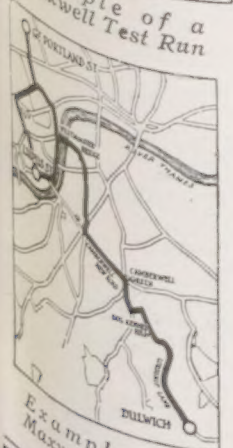
NEW PRICE **Standard** **£375**
 Touring Model

Painted Maxwell Grey or Blue, including plated radiator and head lamp rims, also side lamps and spare tyre and tube

MAXWELL MOTORS LIMITED, 212/214 Great Portland St., London, W.1
 (Telephone No.: Museum 6036-7). Works & Service Stations: Maxwell Motors Ltd., 149 Lupus Street, Pimlico (Telephone No.: Victoria 2802-3); and T. Garner, Ltd., 60 Deansgate, Manchester (Telephone No.: Manchester Central 5886); Wholesale Distributors for Manchester Area: Wm. Grimshaw & Co., Prestwich, Lancs. (Telephone No.: Whitefield 168)



Example of a Maxwell Test Run



Example of a Maxwell Test Run



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TOURING CAR MANCHESTER
MODELE-DE-LUXE (The Complete
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All with 106-inch Wheelbase.
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was the enormous number of Overland Cars sold at the recent Motor Exhibition, Olympia. Follow the example of thousands of satisfied owners and let your choice be an Overland, thus ensuring a real pleasure-season.

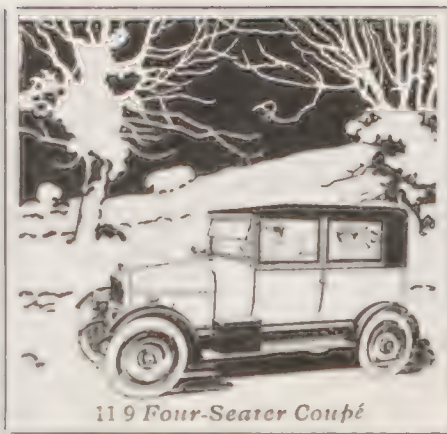
Write for EVIDENCE FOLDER and particulars of any model,

WILLYS OVERLAND CROSSLEY, LTD.,
Head Office & Works: HEATON CHAPEL, MANCHESTER,
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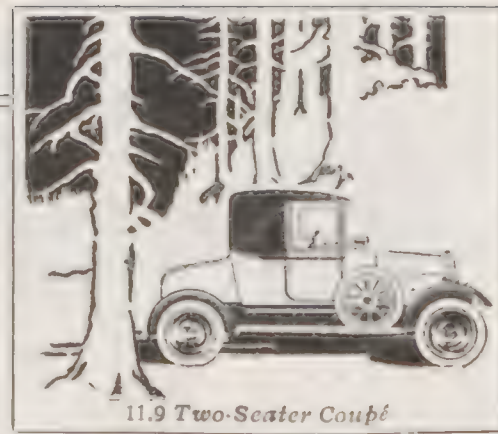
Overland and Willys-Knight Cars. Garford Trucks. Fisk Tyres. Willys-Light and Power Plant.



Four-Seater Touring Model



11.9 Four-Seater Coupé



11.9 Two-Seater Coupé

THE HILLMAN Four-Seater Coupé combines touring accommodation with closed carriage comfort should the weather prove inclement, and its utility as an "all the year round" Town carriage will appeal to those motorists who desire such qualifications. The body is specially constructed to give complete protection when the hood is up, and the side lights are glass which slide into the body when not in use. Its conversion from an open touring car to a closed carriage is a matter of moments.

A HILLMAN Four-Seater Coupé Owner writes:—

"I have had the car for about eighteen months now, and I have driven her somewhere about 15,000 miles (probably over) without the slightest trouble of any sort. This is a splendid record, seeing that I have had to drive night and day, in all sorts of weathers on all sorts of roads, sometimes on cart tracks over the moors. In conclusion I should like to say that I have been more than satisfied with my Hillman, reliability is what a Doctor wants, and I have had it."

11.9 h.p. HILLMAN Four-Seater Coupé -	-	£630
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11.9 h.p. HILLMAN Four-Seater Touring -	-	£550
11.9 h.p. HILLMAN Two-Seater Touring -	-	£495
10 h.p. HILLMAN Speed Model -	-	£590

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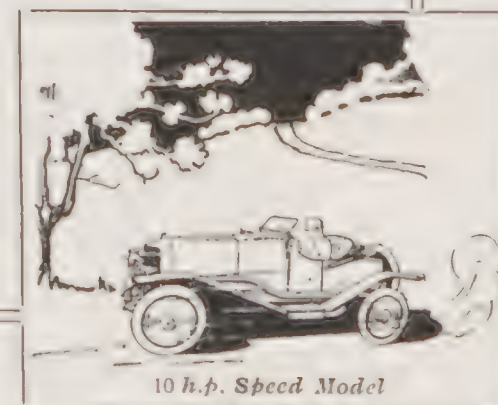
The HILLMAN MOTOR CAR CO., LTD.
COVENTRY

Hillman

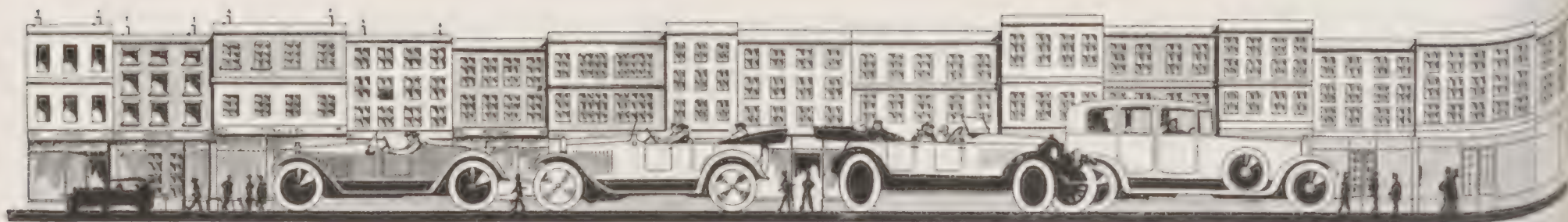
*You cannot do better than
invest your money in a Hillman*



11.9 Two-Seater Touring Model



10 h.p. Speed Model



THE · MOTOR · MARKETS · OF · THE · WORLD

FASHION has decreed that the principal motor shopping centre of London is the length and breadth of Great Portland Street. It is possible to buy a car or an accessory without going within a mile of the street, but, on the other hand, unless one has very definite ideas as to one's requirements, it is scarcely wise.

There is no particular reason why the motor show rooms should have concentrated upon Great Portland Street; it is not more central than Long Acre or Pall Mall—one always finds that the particular shop one wants is at the other end, no matter which way one approaches it, so that it is not more easily reached than many other parts of London. But there it is—Great Portland

Street is the principal motor market in London, and, if of London, of Great Britain also. So the man who knows simply he wants a car of about a certain power at about a certain price, or knows only that he wants a car, with further acquaintance with details, must go to Great Portland Street to get his requirements satisfied.

You should certainly investigate the **PALLADIUM "Light Twelve"** before deciding on your 1922 car.

The Palladium "Light Twelve" combines a fine specification, excellent service capacity, with a very moderate price and we can offer most advantageous deferred terms.

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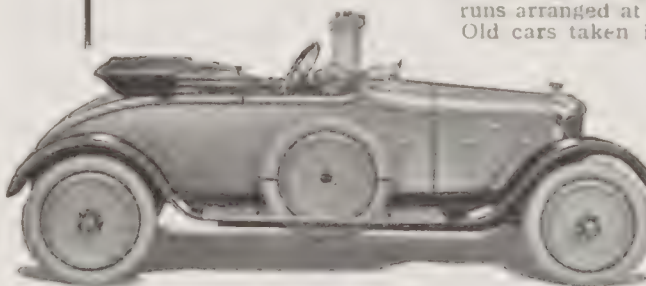
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As leading 'A-C' Agents in London, we are in a position to offer the latest 'A-C' Models on the Deferred Payment System.

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Full range always in stock. Trial runs arranged at your convenience. Old cars taken in part exchange.



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THE **ANSALDO** 12 H.P.

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OVERHEAD VALVE ENGINE 70 x 120

We can prove to you that this Car will meet all your requirements

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INVALUABLE FOR STARTING
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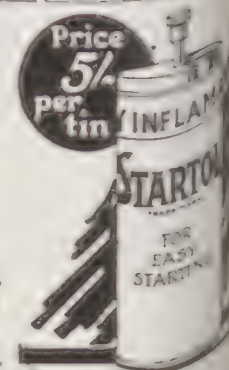
STARTOL

Irrespective of low temperature, a few drops injected into the Compression Taps or applied on a piece of soft rag wrapped round the Air Inlet of the Carburettor will get the engine going in no time. It obviates excessive cranking or long delays.

Buy STARTOL from your Local Garage—It cannot be sent by post. In case of difficulty write to:

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Several High-Class Second-Hand Cars always in Showrooms

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See Page 3 of Cover.

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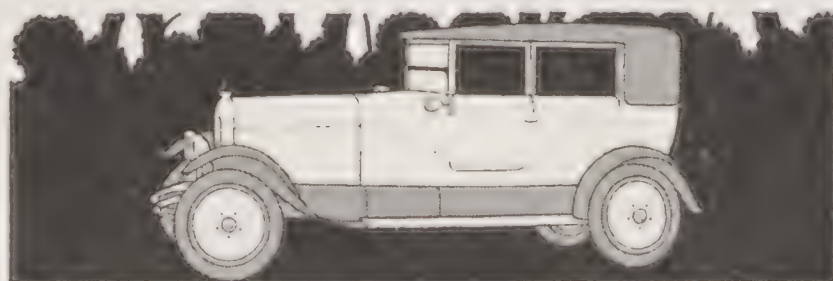
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Prevent Corrosion. Increase Resiliency. Kill Rebound.
Beware of Imitations. Don't risk your car with old
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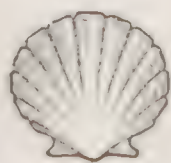
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Protect your engine by using Shell Motor Lubricating Oil

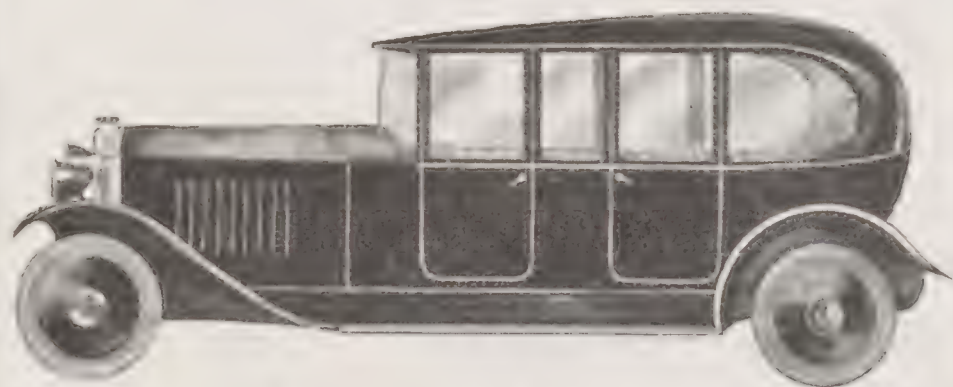
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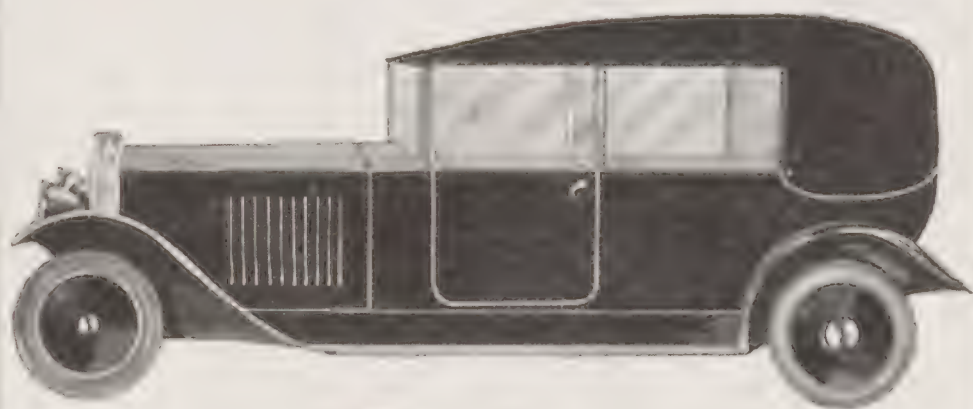
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FIT a set of Hartford Shock Absorbers to your car this season and fully enjoy your motoring in spite of the BAD ROADS. Hartfords will protect your car from jolts and jars due to uneven road surfaces; they stop bouncing and rolling and add greatly to your comfort.

HARTFORD T. B. ANDRE & CO. LTD SHOCK ABSORBERS

Hartford Shock Absorbers are the best form of car protection you can buy, proved by over 500,000 satisfied private owners, who have experienced the considerable advantages they afford. 95 per cent. of all the Great Racers of the world also use Hartfords, and every Road and Track event during 1921 was won on a car equipped with Hartfords.

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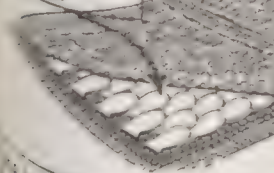
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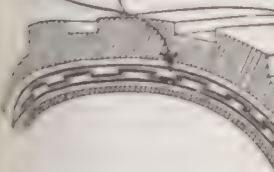
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621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000. 1001. 1002. 1003. 1004. 1005. 1006. 1007. 1008. 1009. 1010. 1011. 1012. 1013. 1014. 1015. 1016. 1017. 1018. 1019. 1020. 1021. 1022. 1023. 1024. 1025. 1026. 1027. 1028. 1029. 1030. 1031. 1032. 1033. 1034. 1035. 1036. 1037. 1038. 1039. 1040. 1041. 1042. 1043. 1044. 1045. 1046. 1047. 1048. 1049. 1050. 1051. 1052. 1053. 1054. 1055. 1056. 1057. 1058. 1059. 1060. 1061. 1062. 1063. 1064. 1065. 1066. 1067. 1068. 1069. 1070. 1071. 1072. 1073. 1074. 1075. 1076. 1077. 1078. 1079. 1080. 1081. 1082. 1083. 1084. 1085. 1086. 1087. 1088. 1089. 1090. 1091. 1092. 1093. 1094. 1095. 1096. 1097. 1098. 1099. 1100. 1101. 1102. 1103. 1104. 1105. 1106. 1107. 1108. 1109. 1110. 1111. 1112. 1113. 1114. 1115. 1116. 1117. 1118. 1119. 1120. 1121. 1122. 1123. 1124. 1125. 1126. 1127. 1128. 1129. 1130. 1131. 1132. 1133. 1134. 1135. 1136. 1137. 1138. 1139. 1140. 1141. 1142. 1143. 1144. 1145. 1146. 1147. 1148. 1149. 1150. 1151. 1152. 1153. 1154. 1155. 1156. 1157. 1158. 1159. 1160. 1161. 1162. 1163. 1164. 1165. 1166. 1167. 1168. 1169. 1170. 1171. 1172. 1173. 1174. 1175. 1176. 1177. 1178. 1179. 1180. 1181. 1182. 1183. 1184. 1185. 1186. 1187. 1188. 1189. 1190. 1191. 1192. 1193. 1194. 1195. 1196. 1197. 1198. 1199. 1200. 1201. 1202. 1203. 1204. 1205. 1206. 1207. 1208. 1209. 1210. 1211. 1212. 1213. 1214. 1215. 1216. 1217. 1218. 1219. 1220. 1221. 1222. 1223. 1224. 1225. 1226. 1227. 1228. 1229. 1230. 1231. 1232. 1233. 1234. 1235. 1236. 1237. 1238. 1239. 1240. 1241. 1242. 1243. 1244. 1245. 1246. 1247. 1248. 1249. 1250. 1251. 1252. 1253. 1254. 1255. 1256. 1257. 1258. 1259. 1260. 1261. 1262. 1263. 1264. 1265. 1266. 1267. 1268. 1269. 1270. 1271. 1272. 1273. 1274. 1275. 1276. 1277. 1278. 1279. 1280. 1281. 1282. 1283. 1284. 1285. 1286. 1287. 1288. 1289. 1290. 1291. 1292. 1293. 1294. 1295. 1296. 1297. 1298. 1299. 1300. 1301. 1302. 1303. 1304. 1305. 1306. 1307. 1308. 1309. 1310. 1311. 1312. 1313. 1314. 1315. 1316. 1317. 1318. 1319. 1320. 1321. 1322. 1323. 1324. 1325. 1326. 1327. 1328. 1329. 1330. 1331. 1332. 1333. 1334. 1335. 1336. 1337. 1338. 1339. 1340. 1341. 1342. 1343. 1344. 1345. 1346. 1347. 1348. 1349. 1350. 1351. 1352. 1353. 1354. 1355. 1356. 1357. 1358. 1359. 1360. 1361. 1362. 1363. 1364. 1365. 1366. 1367. 1368. 1369. 1370. 1371. 1372. 1373. 1374. 1375. 1376. 1377. 1378. 1379. 1380. 1381. 1382. 1383. 1384. 1385. 1386. 1387. 1388. 1389. 1390. 1391. 1392. 1393. 1394. 1395. 1396. 1397. 1398. 1399. 1400. 1401. 1402. 1403. 1404. 1405. 1406. 1407. 1408. 1409. 1410. 1411. 1412. 1413. 1414. 1415. 1416. 1417. 1418. 1419. 1420. 1421. 1422. 1423. 1424. 1425. 1426. 1427. 1428. 1429. 1430. 1431. 1432. 1433. 1434. 1435. 1436. 1437. 1438. 1439. 1440. 1441. 1442. 1443. 1444. 1445. 1446. 1447. 1448. 1449. 1450. 1451. 1452. 1453. 1454. 1455. 1456. 1457. 1458. 1459. 1460. 1461. 1462. 1463. 1464. 1465. 1466. 1467. 1468. 1469. 1470. 1471. 1472. 1473. 1474. 1475. 1476. 1477. 1478. 1479. 1480. 1481. 1482. 1483. 1484. 1485. 1486. 1487. 1488. 1489. 1490. 1491. 1492. 1493. 1494. 1495. 1496. 1497. 1498. 1499. 1500. 1501. 1502. 1503. 1504. 1505. 1506. 1507. 1508. 1509. 1510. 1511. 1512. 1513. 1514. 1515. 1516. 1517. 1518. 1519. 1520. 1521. 1522. 1523. 1524. 1525. 1526. 1527. 1528. 1529. 1530. 1531. 1532. 1533. 1534. 1535. 1536. 1537. 1538. 1539. 1540. 1541. 1542. 1543. 1544. 1545. 1546. 1547. 1548. 1549. 1550. 1551. 1552. 1553. 1554. 1555. 1556. 1557. 1558. 1559. 1560. 1561. 1562. 1563. 1564. 1565. 1566. 1567. 1568. 1569. 1570. 1571. 1572. 1573. 1574. 1575. 1576. 1577. 1578. 1579. 1580. 1581. 1582. 1583. 1584. 1585. 1586. 1587. 1588. 1589. 1590. 1591. 1592. 1593. 1594. 1595. 1596. 1597. 1598. 1599. 1600. 1601. 1602. 1603. 1604. 1605. 1606. 1607. 1608. 1609. 1610. 1611. 1612. 1613. 1614. 1615. 1616. 1617. 1618. 1619. 1620. 1621. 1622. 1623. 1624. 1625. 1626. 1627. 1628. 1629. 1630. 1631. 1632. 1633. 1634. 1635. 1636. 1637. 1638. 1639. 1640. 1641. 1642. 1643. 1644. 1645. 1646. 1647. 1648. 1649. 1650. 1651. 1652. 1653. 1654. 1655. 1656. 1657. 1658. 1659. 1660. 1661. 1662. 1663. 1664. 1665. 1666. 1667. 1668. 1669. 1670. 1671. 1672. 1673. 1674. 1675. 1676. 1677. 1678. 1679. 1680. 1681. 1682. 1683. 1684. 1685. 1686. 1687. 1688. 1689. 1690. 1691. 1692. 1693. 1694. 1695. 1696. 1697. 1698. 1699. 1700. 1701. 1702. 1703. 1704. 1705. 1706. 1707. 1708. 1709. 1710. 1711. 1712. 1713. 1714. 1715. 1716. 1717. 1718. 1719. 1720. 1721. 1722. 1723. 1724. 1725. 1726. 1727. 1728. 1729. 1730. 1731. 1732. 1733. 1734. 1735. 1736. 1737. 1738. 1739. 1740. 1741. 1742. 1743. 1744. 1745. 1746. 1747. 1748. 1749. 1750. 1751. 1752. 1753. 1754. 1755. 1756. 1757. 1758. 1759. 1760. 1761. 1762. 1763. 1764. 1765. 1766. 1767. 1768. 1769. 1770. 1771. 1772. 1773. 1774. 1775. 1776. 1777. 1778. 1779. 1780. 1781. 1782. 1783. 1784. 1785. 1786. 1787. 1788. 1789. 1790. 1791. 1792. 1793. 1794. 1795. 1796. 1797. 1798. 1799. 1800. 1801. 1802. 1803. 1804. 1805. 1806. 1807. 1808. 1809. 1810. 1811. 1812. 1813. 1814. 1815. 1816. 1817. 1818. 1819. 1820. 1821. 1822. 1823. 1824. 1825. 1826. 1827. 1828. 1829. 1830. 1831. 1832. 1833. 1834. 1835. 1836. 1837. 1838. 1839. 1840. 1841. 1842. 1843. 1844. 1845. 1846. 1847. 1848. 1849. 1850. 1851. 1852. 1853. 1854. 1855. 1856. 1857. 1858. 1859. 1860. 1861. 1862. 1863. 1864. 1865. 1866. 1867. 1868. 1869. 1870. 1871. 1872. 1873. 1874. 1875. 1876. 1877. 1878. 1879. 1880. 1881. 1882. 1883. 1884. 1885. 1886. 1887. 1888. 1889. 1890. 1891. 1892. 1893. 1894. 1895. 1896. 1897. 1898. 1899. 1900. 1901. 1902. 1903. 1904. 1905. 1906. 1907. 1908. 1909. 1910. 1911. 1912. 1913. 1914. 1915. 1916. 1917. 1918. 1919. 1920. 1921. 1922. 1923. 1924. 1925. 1926. 1927. 1928. 1929. 1930. 1931. 1932. 1933. 1934. 1935. 1936. 1937. 1938. 1939. 1940. 1941. 1942. 1943. 1944. 1945. 1946. 1947. 1948. 1949. 1950. 1951. 1952. 1953. 1954. 1955. 1956. 1957. 1958. 1959. 1960. 1961. 1962. 1963. 1964. 1965. 1966. 1967. 1968. 1969. 1970. 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993. 1994. 1995. 1996. 1997. 1998. 1999. 2000. 2001. 2002. 2003. 2004. 2005. 2006. 2007. 2008. 2009. 2010. 2011. 2012. 2013. 2014. 2015. 2016. 2017. 2018. 2019. 2020. 2021. 2022. 2023. 2024. 2025. 2026. 2027. 2028. 2029. 2030. 2031. 2032. 2033. 2034. 2035. 2036. 2037. 2038. 2039. 2040. 2041. 2042. 2043. 2044. 2045. 2046. 2047. 2048. 2049. 2050. 2051. 2052. 2053. 2054. 2055. 2056. 2057. 2058. 2059. 2060. 2061. 2062. 2063. 2064. 2065. 2066. 2067. 2068. 2069. 2070. 2071. 2072. 2073. 2074. 2075. 2076. 2077. 2078. 2079. 2080. 2081. 2082. 2083. 2084. 2085. 2086. 2087. 2088. 2089. 2090. 2091. 2092. 2093. 2094. 2095. 2096. 2097. 2098. 2099. 2100. 2101. 2102. 2103. 2104. 2105. 2106. 2107. 2108. 2109. 2

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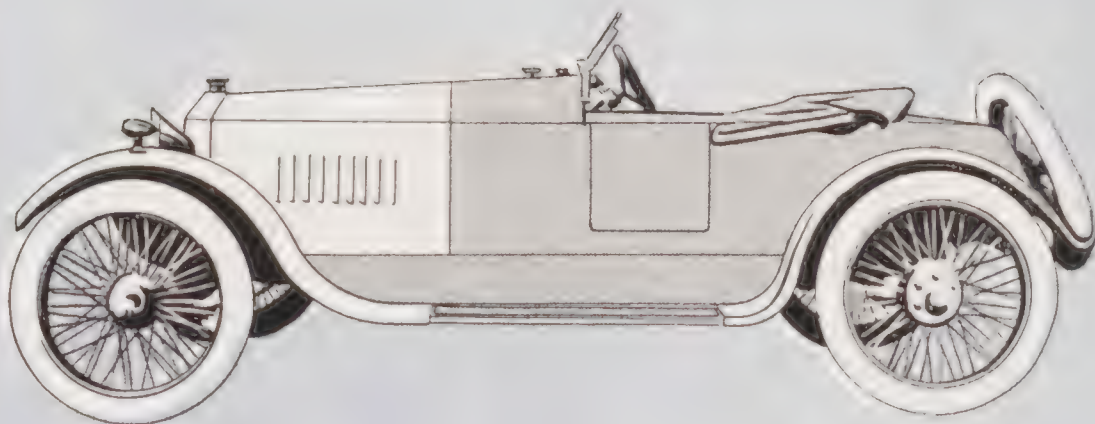
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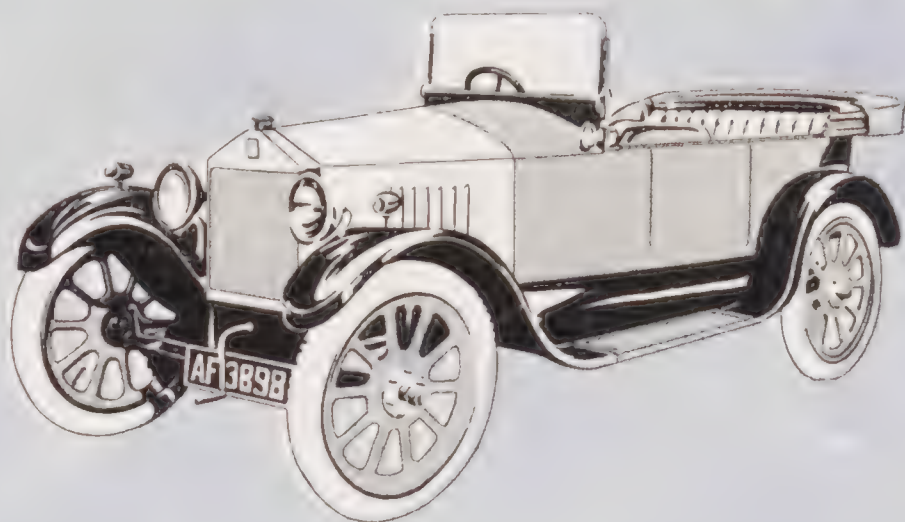


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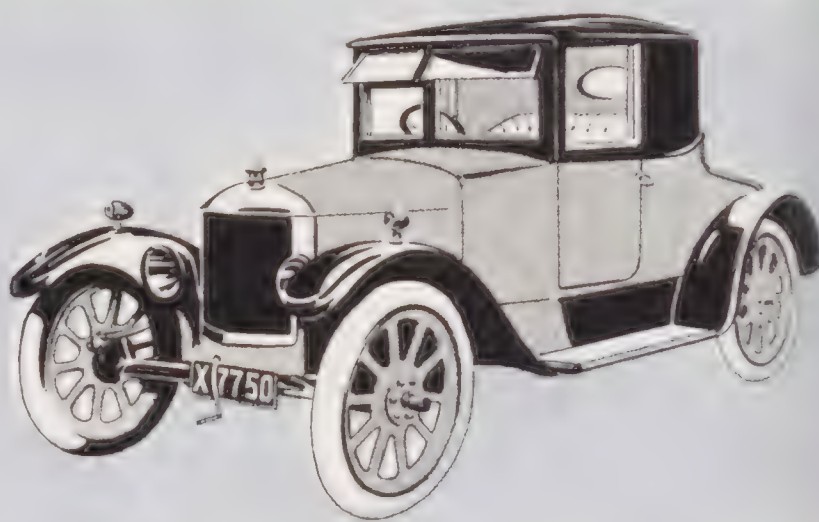
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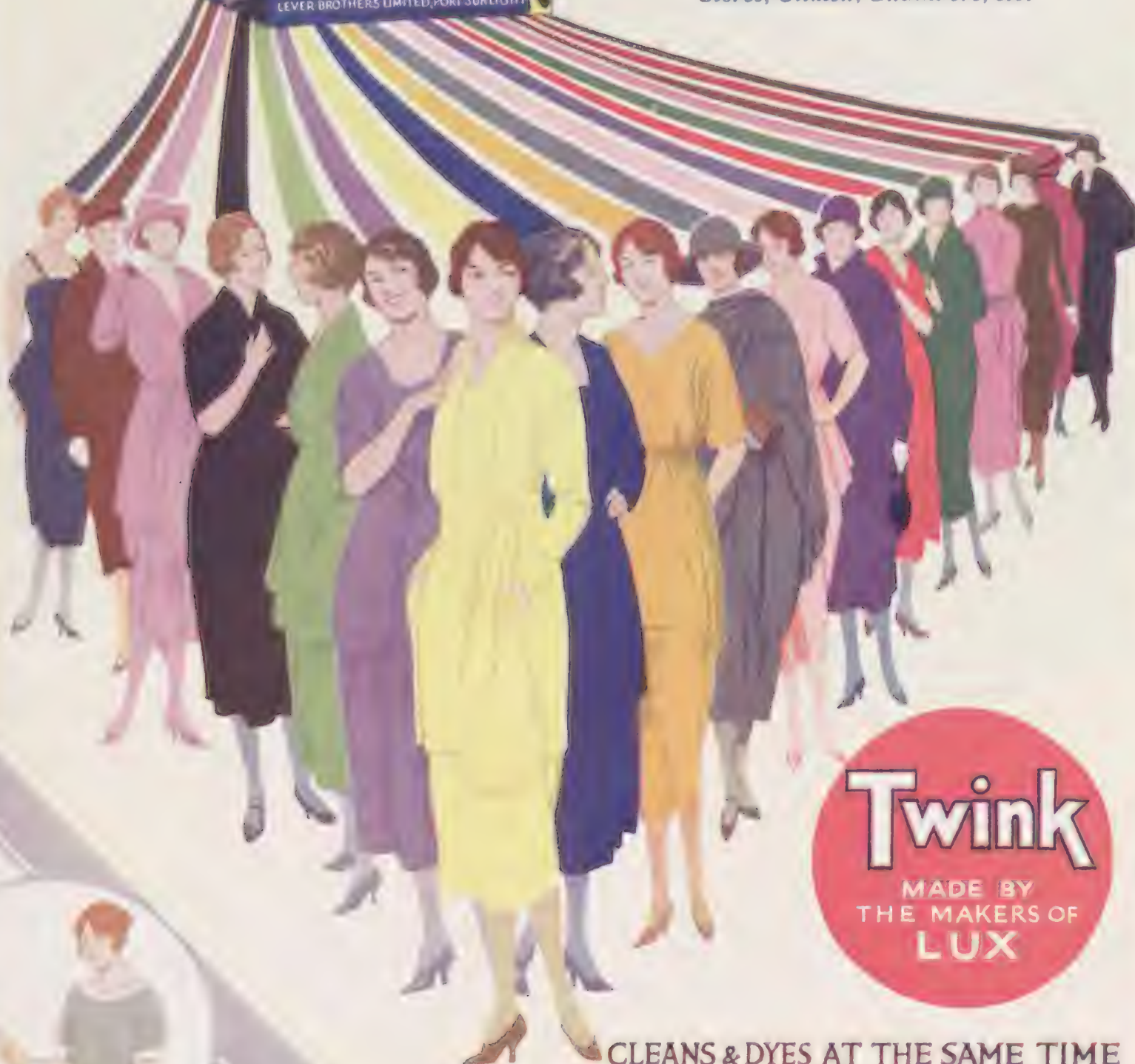
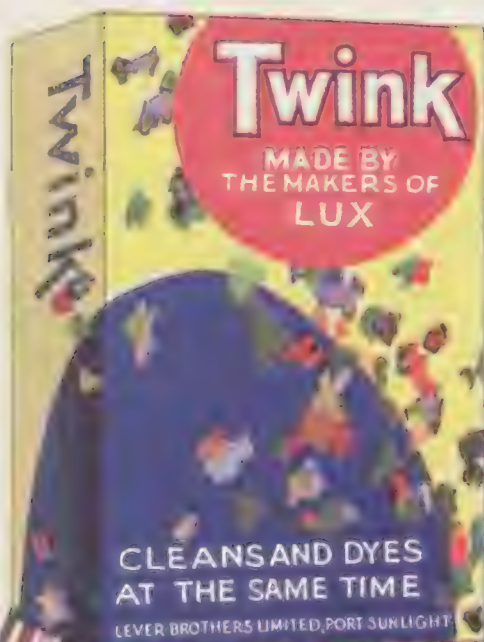
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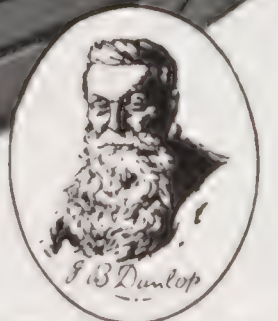
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CONTENTS

	PAGES
THE PRINCE OF WALES IN INDIA (<i>Frontispiece</i>) ..	2
AFTER DUE REFLECTION	3, 4
TERRA INCOGNITA. By Aneurin	5
STEADY DOES IT! By Captain E. de Normanville ..	6, 7
SOCIAL CELEBRITIES AND THEIR CANINE FRIENDS ..	8, 9
THE AUSTIN TWELVE. SOME CONCLUSIONS AS A RESULT OF AN EXTENSIVE TEST	10, 11
ADIEU! DEPARTED IS THE GLORY OF THE "GOOD OLD DAYS"	12
THEORY—AND PRACTICE	13
ÆSOP AT IT AGAIN	14, 15
AN EFFECTIVE SPLASH PREVENTER. By "The Motor- Owner" Paris Correspondent	16
A TOUR IN HARDY'S COUNTRY. By Clive Holland ..	17-19
COUNTRY ROAD CLUBS. AN ADMIRABLE SCHEME TO IMPROVE TOURING CONDITIONS	20, 21
THE NOBLEST (AND MOST PROFITABLE) SPORT. By Captain P. A. Barron	22, 23
THE ASCALDO: AN ITALIAN NEWCOMER POSSESSING STRIKING CHARACTERISTICS	24

	PAGES
THE LICORNE CAR, AND HOW "THE MOTOR-OWNER" TESTER MADE AN EXHIBITION OF HIMSELF	25
A NEW SUSPENSION NEEDED. By Wilfred Gordon Aston	26, 28
QUEEN OF SHEBA. A WONDERFUL FILM AT THE ALBERT HALL	27
THE RIGHT WAY'S THE EASIER	29
THE SELF-STARTER. By Elliot Bailey	30, 31
A NEW STAR HAS RISEN. A BRIEF CRITICISM OF THE NEW MODEL OF A PIONEER MAKE	32
THE ROMANCE OF THE ANGUS-SANDERSON CAR ..	33-40
THE FOURTH DIMENSIONAL CAR. By Robert W. Beare	41, 42, 44
SOLOMON IN ALL HIS GLORY	43
THE MICKLES THAT MAK' A MUCKLE	45
MY LOG BOOK. By Hermes	46, 48
GIRTH CONTROL	47
ANTICIPATIONS	49, 50
A LESSON IN HISTORY. By Professor R. F. C. Crossley	51, 52
THE END OF WATER COOLING. By W. Harold Johnson	53-55
WHAT'S ON IN FEBRUARY?	56

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The Editor will be pleased to consider contributions of special interest to the car owner, provided they are of high quality and in every way suitable to the magazine. Short illustrated articles are preferred, dealing with any aspect of private motoring, either as regards touring or the home management of the car. First-class snapshots of roadside scenes or incidents are particularly desired. All photographs and sketches should be fully titled on the backs and bear the name and address of the sender.

Contributions should be addressed to the Editor of "The Motor Owner," 10, Henrietta Street, W.C.2, and should be accompanied by a stamped, addressed envelope. While every effort will be made to return them if unsuitable, the Editor cannot hold himself responsible in case of loss or damage.

THE PRINCE OF WALES IN INDIA.

His Royal Highness continues to enhance his personal popularity in the far-flung



outposts of Empire. The Indian visit is as great a success as the world tour.

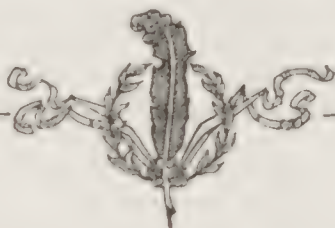


His Royal Highness the Prince of Wales leaving the Courts of Justice at Allahabad in the car he is using throughout the Indian tour. This is one of a fleet of twelve Crossleys which are being used as the official cars in the tour.

SOME PERTINENT QUESTIONS.

AFTER DUE REFLECTION.

"The Motor-Owner" considers Passing Events with an Open Mind.



THOSE SURPLUS MILLIONS.

THERE are several questions which motor-owners are asking themselves unprofitably—questions which they might with some possibility of profit ask their local members of Parliament. Most interesting, if not most vital, is the question of the prospect of a reduction in the scale of the tax. On the face of things, the Government required to raise a certain amount of money. They raised it easily, so easily that the means adopted proved good for a couple of millions surplus. They have the surplus to play with; they have an additional hundred thousand or thereabouts in interest. Is it not reasonable to demand that the motorists' burden should be lightened in the future? To continue our very rough calculations, we will say that eight millions were required and ten were obtained. The two millions surplus goes towards the next year's eight millions requirements, leaving six only to be found. On these figures, surely we have a right to require that our automobile tax for 1922 shall be but six-tenths of the 1921 amount—twelve shillings per horse-power, in fact? The new Budget will be coming along very shortly—is undoubtedly in process of formation even now. Is the Chancellor making allowance for the over-production of his 1921 demands?

A BALANCE SHEET WANTED.

If any body other than a Government department had the handling of so enormous an amount of public money in the course of the year, the majority of us would want to know pretty accurately how much of it was being spent, and precisely in what manner. We should want to see a detailed balance sheet, and we should have something serious to say if too large a proportion went in salaries and general establishment charges, petty cash and so forth. If there seemed a tendency to place too much to reserve, or if income exceeded

expenditure by too wide a margin, we should want an increased dividend. Just because money paid out in taxation is regarded by the average individual as lost beyond recall—as much lost as the jewellery handed over to the highway robber of old—we lose interest in it. We've got to pay it, and that's that! This attitude is not good enough, however. This sum of ten or eleven million pounds was taken from us on the distinct understanding that it would be spent in our interests—which, incidentally, are the interests of the nation. There was a distinct understanding, also, that if after twelve months' experience the tax proved over-productive it would be reduced. We have a perfect right to demand, and we do demand, details of the year's expenditure and of future policy. Details of income have been published; on the strength of those details we have a perfect right to demand, and we do demand, an immediate reduction in the scale of automobile taxation. The forthcoming Budget will show whether the Government can keep a promise, but in the meantime a comprehensive statement by the Transport Ministry is in honour due to motor-owners.

LIGHT CAR PROGRESS.

If the growing strength of the Junior Car Club is an indication of the progress of the light car movement, then this type of vehicle must be in a very sound and satisfactory position indeed. The annual dinner of the organisation in question was held recently, and created a record in the matter of attendance for similar functions promoted by the Club. As a matter of fact, the membership of the Junior Car Club is climbing rapidly towards the four-figure mark, and we shall be very much surprised if the activities of the forthcoming year do not have the effect of carrying the number of members well beyond the milestone we have indicated.

IRELAND FOR MOTORISTS.

The settlement of Irish national affairs not only opens up that delightful country once again to the automobile tourist, but promises a more or less immediate access of commercial prosperity. The motor industry of Ireland has very nearly ceased to exist, but the basis is there, and with the resuscitation of touring the revival of that industry must be automatic. The one cannot take place without the other. There is, we should say, money to be made, but that money will be the just reward of enterprise and initiative. In other words, it will not be what is commonly known as "easy money." In a letter from Sir James Percy, before us at the moment, we find the phrases: "It has been a big job keeping the flag flying through recent troubles. However, the horizon is now clear, and we are looking forward to a period of great prosperity." That is the attitude that is wanted—a certain amount of optimism, backed by complete willingness to roll up shirt-sleeves and get to work. The re-establishment of the Irish branches of the A.A. and the decision of the Royal Irish Automobile Club to organise a motor exhibition next year are indicative that the right spirit is abroad, and that those concerned at the head of things realise the possibilities of the country. It is now up to the rank and file to "get down to it." If they will do that, there is no reason why Ireland, in a motoring sense, should not "boom."

"NOBODY'S BUSINESS."

There is a popular quotation to the effect that what is everyone's business is no one's affair, and this is very true in regard to more than one thing in connection with automobilism. There is no law, for instance, to prevent a driver from running through city streets with his head-lamps full on. It is unnecessary and unsportsmanlike, and is not often done; but it may be done, and sometimes is.

THE PARKING QUESTION.

Everyone realises the inconvenience, but no one takes action. The matter of cyclists' rear lamps, so obvious as not to be worth further argument, is, we believe, on the eve of sane settlement, but there is another equally grave failing in our motoring regulations. It is possible for a driver to halt his car on the wrong side of the road with his side, or even head, lamps on, thus causing a painful amount of uncertainty, and in some cases great danger, to approaching traffic. This has been "everyone's" business, but Major Stenson Cooke, Secretary of the Automobile Association, endeavours in a circular letter to remove the evil, even though he cannot localise the responsibility. His summary of the situation is masterly in its brevity: "When a car stands on the 'wrong' side of the road with its head or tail lamps on, the natural tendency of the oncoming motorist is to drive to the left of those lights. The danger is obvious." We would

go even further and say that even in daytime *no vehicle* should be halted on the wrong side of the road. If it is desired to stop outside a particular shop in town or house in the country, there is seldom any difficulty in either turning the car or running round a block to get the proper direction. Without elaborating the argument, it must be obvious that if such action were general a certain amount of congestion and confusion would be avoided. And any measure having that object must be a good measure.

MOTORING "DON'TS."

It must not be thought, from our use of the words "measure" or "regulation," that THE MOTOR-OWNER desires to see more definite legal control of automobile manners. Far from it, for the average motorist is sufficiently enlightened and has sufficient common decency to behave himself. The trouble is that many a small item only becomes apparent to

the individual as misbehaviour after he himself has suffered from the effects of it when committed by someone else. Perhaps we are inclined to unduly idealise human nature, but we cannot conceive that anyone to whom the danger of parking a car on the right-hand side of the road has been pointed out ever repeating the offence. Surely it should not be necessary to make the matter a legal offence? Similarly, surely no right-minded driver would drive deliberately at speed through puddles to the detriment of the clothes and comfort of pedestrians? It is an open question; but we do think that the issue of a carefully compiled list of "Motoring Don'ts" to the great body of club and association members would have a good result. Most of the things of which each of us has to complain in the behaviour of others are due to ignorance. Enlightenment would bring relief. We have more than half a mind to publish such a list ourselves.



Amateur Sportsman (to friend whose horse has thrown him): "All right, old chap. I'll catch him."
Friend: "No, let him go. I never want to see him again."

A "BUMPER" NIGHT ATONES

T E R R A I N C O G N I T A .

By Aneurin.

Moor and Covert are overshadowed by the stern delights of the Saltings.

THERE are sordid souls who would chart Paradise. Not for the gold of Ophir will I give a map reference. Indeed 'twere sacrilege to think of mundane maps in connection with such a spot; moreover very few would mark it. It must suffice that it lies seven miles from a railway station; secure from the vulgar charabanc, unknown to the wandering motorist. In truth even I like not to approach by car. More seemly were the carrier's cart; more in keeping with the tiny old-world village and the drowsy water-side haunted by ghosts of long departed smugglers.

The listless river brims smoothly over the mudflats. A hay barge in the channel lifts to the rising tide. Dinghies begin to stir in the creeks. A mile or so beyond the village we run the car into a field and cover the radiator. Betty, the spaniel, noses around while we cram our pockets with cartridges and put together the gun: not the delicate ejector of the grouse moor but a stout hammer gun built to withstand mud and salt water.

A narrow path leads down to the sea-wall crossing it by a stile. Far as the eye can reach it stretches, describing on the left an arc of a circle which encloses an expanse of saltings. Clear against the grassy bank shows a line of corks and debris tossed up by the last spring tides. This is the high water mark and below it all the world can shoot. Time was when the keepers on the big estate the landward side of the wall fired blank cartridges to make the duck keep high, and at the King's Head of a night they will tell you of the bitter warfare which ensued and of shots fired at other marks than wildfowl.

We take up our position in an empty "fleet" or drain behind the wall. There is an etiquette in these affairs. Not for worlds

would I approach a yard nearer the stile, though more duck will fly that way, for the stile is booked by the landlord of the King's Head. Yonder by the stumps of the old breakwater is a better spot than mine, but that is claimed by a longshoreman called Pete, armed with an ancient muzzle-loader. Striding along the wall can be seen the dark bulk of the Parson.

Turn up the collar. The cold is bitter, but it will be a rare night for the fowler. The rising wind will make the duck keep low. Fleecy clouds scudding across the moon will make it easy to see them.

From the water's edge comes the call of the redshank. In all the world is there a cry so eerie? Spirits of the Wild seem to be brooding over the foreshore. Then in between the gusts there falls on the ear a faint "honk-honk." High overhead goes a skein of geese, a mighty wedge against the darkening sky. They as ever are out of range.

Two reports in quick succession denote that the parson has opened fire on a congregation of plover. Round and round they whirl in their aimless fashion. Pete does not think them worth his powder and shot. Over the wall skims a bunch of curlew,

their long curved beaks showing clear against the grey. Pete lets drive at the same moment and four drop. His single barrel must have bagged two. At all events we'll leave it at that.

For some time curlew and the foolish plover keep us occupied. Then an interval, every nerve on the stretch. If only the light will hold! Hark! The well-known sound seems to pass directly overhead. Again and yet again. For the life of me I cannot pick them out against the gloaming. To right and left the guns are popping merrily. The air is filled with the rustle of many wings. At last I have them, the shadowy forms of duck. Singly, in pairs, in trips. Still they come; not like the curlew on level keel, but seeming to fly bolt upright. Missed, by Jove! But no! "No 4" will take no denial. He falls to the rear with a "wump," and Betty races off.

Once get your eye in and the rest is easy. The fierce delight of it grips body and soul. The gun barrels grow hot to the touch. . . . How long it lasts I cannot say, for time has ceased to be. Now only single shots are heard. The intervals between them lengthen. Then . . . silence. The flight is over. There is a whiff of burned powder in the air.

We walk back to the car well laden. A touch on the head-lamp switch brings down the curtain of night. It has been a bumper night, atoning for many blank ones—how many, only a wild fowler can know.

Moor, stubble, field and covert. I hark to their call in turn and love their smooth delights—and yet . . . there is something missing. Louder and ever louder comes the wild stern call of the Saltings and the bluff Freemasonry of the Fore-shore. It is irresistible.



"The cold is bitter, but it will be a rare night for the fowler. . . . From the water's edge comes the call of the redshank. In all the world is there a cry so eerie?"

STEADY DOES IT!

By Capt. E. de Normanville.

The present gradual improvement is more valuable than a sudden change for the better.

DO you like Jeremiahs? Frankly, I confess that I loathe them. In fact, there is only one species for whom I have a more holy contempt, and that is the interfering Kill-joy. If I had my way, such small-minded folk would be dumped on a distant island until they confessed their reformation. They could do what they liked themselves, but not interfere with other people's just amusements. And the Jeremiah is nearly as bad. He is always going about telling everybody how everything is going to the dogs—or even somewhere where the climate is warmer. Just at present he is very busy with the British motor industry. You meet him in the trade itself, and you meet him on the Rialto as a reputedly respectable member of the genus Republicus Britannicus.

For some time past I have been saying "To hell with him!" but that is not over-complimentary, nor is it so absolutely convincing as it might be. And further, mark you, these self-same Jeremiah Pessimistics are dangerous folk. Their creed is insidious. The continual preaching and portending catastrophe begins to wear away the sounder judgment of even the most staunch believer. Therefore, let us have them out in the open—and rend them asunder.

SOME OUTSIDE FACTORS.

Now what are the chief arguments or alleged arguments of these disgruntled Jeremiahs? They tell you that the British motor industry is doomed to

perdition—of the financial and industrial type, of course. They point to this, that, and the other firm that has gone out of business. They point to this, that, and the other firm that has lost umpteen thousands of pounds on the past year's trading. They point to everything that is bad in the general industrial situation, and prove—to their own apparently complete satisfaction—how utterly impossible it is for the industry to recover from these terrible happenings.

Well, I am not going to say that everything in the industrial garden is rosy; far from it. I do say, however, that everything is gradually improving, and that gradual improvement is more valuable and likely to be more stable than any sudden change for the better. In our own particular sphere as a trade embodied in the huge

engineering industry of the country, all the real signs and portents are favourable. The workpeople are beginning to realise that the Government's extreme war-time folly of high wages for comparatively little work cannot obtain under the hard facts of real industrial life. We can pay good wages for good work—but nothing except a Government of supine stupidity and unlimited international credit can pay ridiculously high wages for a small output. The world is no longer a garden of Eden. It is an industrial conglomeration of nationalities which must thrive by the sweat of their brows—or browse without thriving. This lesson is gradually soaking in—and it is a very healthy sign. Iron, steel, coal, and wages are all slowly but surely getting nearer to the stratum line of commercial practicability.

The nearer they get to that essential factor, the stronger will be the recuperative capacity of our industry. So much for what I may term the general surrounding conditions, or outside factors.

THE INSIDE FACTORS.

Let us now come to the consideration of some of the more direct inside factors of the present situation. Our doleful Jeremiahs make much capital out of the number of firms who have started in the motor industry since the termination of the war—and gone under. Well, Mr Reader, I do not want you to think me a callous brute. I'm not really, honest Injun! But in reviewing the troubles I maintain that it is necessary to



Miss F. Walker, of Knightsbridge, about to try the new Maxwell of which she recently took delivery. We are inclined to think Miss Walker's choice of disc wheels fully justified by the improved appearance of the car.

THE BENEFIT OF FAILURE.

isolate entirely the personal element if we are to arrive at a true perspective. We must get up on a plank of impersonality and study the proposition from a national standpoint. We may, personally, be very sorry for Mr. Hopeful and his mother-in-law, Mrs. Muchtoo Trusting, for losing a lot of money in their efforts to launch the Might-Have-Been six-cylinder de luxe. If you like, we will shed a few silent tears on their behalf. But now stand up as men and look at the matter from a national standpoint. Can you cite me a single such failure which has damaged the national status of the British motor industry? No car has ever been made, or ever will be made, of so remarkable a "personality" that if an intending purchaser could not obtain it he would not buy what he considered the next best. The British industry does not lose orders for cars because of these failures. If there were 500 potential buyers per annum for the Might-Have-Been six-cylinder de luxe, then, when that car "fades awayee," those 500 potential purchasers will proceed to buy some other car. I maintain that that is so logical a deduction that we may safely accept it as a fact.

THE CALLOUS BEAST!

If I am honoured with the perusal of these remarks by some of the fair sex readers of THE MOTOR-OWNER, I fear I am about to draw from their sweet lips the unpleasant comment, "The callous beast!" 'Cos why—well, because I'm going to go further. Again speaking from the national standpoint, I venture to suggest that the real strength and ultimate stability of the British motor industry are the better for some of these failures. That may sound a harsh saying. But I believe it to be literally true. With every deference, you, as the average reader, cannot reasonably expect to know all the ins and outs of the various car propositions that are placed on the market.

We scribbling folk are more closely "in the know"—in fact, it is our business to know; and I tell you from that knowledge that whilst there have been many firms in difficulties who have received my most heartfelt sympathy, there have been others whose demise has not saddened my heart. I have been glad to see the back of them—FROM THE NATIONAL STANDPOINT.

FALSE DOCTRINE.

Do not, therefore, let the croakings of these dismal Jeremiahs unduly affect your reasonable measure of optimism as to the future. And do not think that Britain has been alone in these troubles. The motor industry of every civilised country in the world has been subject to the same or worse conditions. The British industry has gone through bad times before, and its virility—as a national entity—is far too strongly founded not to come through again. It will come through—and come through triumphantly. A firm may go here, and another one there. Troublesome times cannot be got rid of at a month's notice. But from the national standpoint, the British motor industry is recuperating its vitality day by day, week by week, and month by month. It will continue to do so until the

haven of better times for all is finally reached.

Is it necessary to give reasons for this optimism? Scarcely; however—In the first place I think there is no possible doubt that labour is adopting a more sensible attitude in regard to its relations with capital. The two forces are not necessarily inimical, although most of our labour troubles in the immediate past lead one to think that some such idea has been at the bottom of the actions of at least one of the parties, if not of both. It is an obvious truth that capital and labour are interdependent, and it seems that this truth has at last come home to roost. That a certain amount of adjustment in the relations may have been necessary cannot be gainsaid, but I think that in this respect at least the bad times of the British motor industry are done with.

Then there is the question of costs—and prices. So far as raw material is concerned, there are plenty of signs that reasonable reductions may be expected, while the uncertainty as to the price to the public of finished cars, which has been so damaging a factor in the immediate past history of the industry, is finally removed by the stabilising effect of the Scottish show. It may be accepted as a fact that

motor car prices are now stable, and will remain so for a long time to come. The tendency will doubtless be downward as a consequence of more satisfactory quotations for the material of which the car is made, but I put the visible evidence of this tendency so far into the future as to be negligible from the point of view of the average purchaser.

There is visible evidence, however, and plainly visible—and that is of the gradual improvement of the British motor industry. Its progress is slow—yes, but sure. And, for the present, that is sufficient. Steady does it! This evidence is convincing as to the fallaciousness of the yarns of the Jeremiahs.



An ingenious gate constructed entirely of farm implements which we discovered in the course of a run on the Peugeot car in the picture. The gate is worthy of inspection, and will be found at Mill Hill, close to Tring, on the Marsworth road.

S O C I A L C E L E B R I T I E S A N D T H E I R

A dog usually "makes a good photograph," probably because his pose is so completely natural. W



Miss Proctor, the daughter of Sir Henry and Lady Proctor of Ware Hill, Great Amwell, Herts, whose engagement to Captain Guy Nicholas Vansittart is announced.



S A N D T H E I R C A N I N E F R I E N D S .

use his postural natural. Witness these six examples taken by Miss Compton Collier.



Above : The Hon. Mrs. Dennis-Wyndham, daughter of Lord Inchcape. Centre : Mrs. Guy Aylwin, who was the widow of the sixth Earl of Annesley, who was killed in action in 1914.

THE AUSTIN TWELVE.

Some Conclusions as a Result of an Extended Test.

THOSE who have been similarly fortunate to ourselves in their experience with the popular Austin Twenty will doubtless have viewed with some curiosity and pleasurable anticipation the introduction of a smaller model of the same make. An account of a test of the Austin Twelve which we have been privileged to make, therefore, will prove interesting.

We found, on first taking over the car, a tendency on our own part to compare the "twelve" with the "twenty"—to forget, even, that we were not at the wheel of the larger model, so similar are the two in their general characteristics. This comparison, naturally, is not fair, but to give the small car the credit that is its due we can honestly say that it falls very little short of the Twenty except in being obviously a little less powerful. It is an ideal car to handle. The wheel is sensitive to the slightest touch, and the steering gives one an impression of absolute certainty, while it is pleasantly free from that liability to transmit road shocks which so frequently mars an unusually delicate steering gear.

The other element of safety—the brakes—were entitled to similarly favourable comment. There was a sensation of positiveness in their action without the slightest tendency to lock or skid the wheels, and both foot and hand controls required a minimum of effort to operate. This point we noted particularly in descending Westerham Hill at a mere crawl. The road surface was covered with

snow, and not feeling quite confident that the car with a load of five up would be altogether controllable on such a surface we kept her well in hand—as we have said, with practically no effort. As a matter of fact, although we started the descent with the second gear in engagement for the sake of the additional braking effect of the engine, we found this quite unnecessary, and, returning to top gear, dropped down in silence and comfort.

To emphasise still further an important point, we may add that, even with a heavy load, we found it possible to apply the hand brake and stop the car in a satisfactorily short distance by using one finger only.

Perhaps it was due to the presence of that unfair tendency to compare the two Austin models that we gained an impression that the "Twelve" is not a particularly fast car; on the

other hand, it may have been that the element of uncertainty introduced by the snow-dusted roads did not permit us to "give her her head." We touched forty, however, and were conscious of several miles per hour in hand; and this, with twelve horsepower and five up, we regarded as sufficient for our test. We were pleasantly surprised, however, at the ability of the car to hold a steady "thirty" up hill and down dale. The long pull up Lordship Lane, when travelling towards Sydenham, for instance, was taken without a falter at this pace, although we should not have been surprised if a little persuasion or even a change down to third had been required. And so it was on the many stiff rises which we encountered later on the southern country roads, including, on the return journey, the long rise from Godstone to Caterham. We should

imagine that the fourth gear ratio is a trifle on the low side, but whatever rate of engine revolutions a road-speed of thirty miles an hour indicates, this is undoubtedly the most efficient engine speed, and when the car is running at that pace, only a really serious hill will pull back the needle of the indicator.

Another point of excellence which must not be allowed to go unnoticed is the suspension. This is quite beyond reproach, and, with a full load of passengers, much above the average for cars of the type of the Austin. But we were more particularly pleased to note the considerable range of the springs in dealing



An Austin Twelve outside Old Kingsbury Church—an interesting edifice well worth a visit. We understand that artillery wheels and not discs, as in this instance, are standard on the new Austin.

A REAL "ALL-WEATHER" CAR.

with varied loads. It was just apparent, and only just apparent, when the car contained the driver only that it did not run quite as comfortably as when all the seats were occupied, but even at that, and over really bad roads, there was a remarkable absence of serious shocks. This ability of one set of springs to accommodate with nearly equal efficiency loads ranging from minimum to maximum, while not a feature that can be reasonably demanded, is still a point to which designers of much more expensive cars than the Austin might study with advantage.

As we have said, the general characteristics of the two Austin models are very similar. The hand brake lever is centrally situated with the gear control on both, but in the smaller car the respective positions of the two have been altered, so that the brake is on the near side, away from the driver. While we suffered no inconvenience and had no difficulty in immediately and automatically finding the brake lever when it was required, one would have imagined that, theoretically at any rate, the old system was the better of the two. It is a small matter, however.

So far we have given nothing but praise to the Austin Twelve, and this for the best of reasons—that we found nothing to criticise adversely. The only points upon which we can raise even the semblance of a complaint are that the clutch spring is a trifle heavier to compress than seems altogether necessary—which may be merely a matter of adjustment—and that the rear seats will accommodate two passengers only in any comfort. This raises the question as to how far it is justifiable to load a twelve horse power chassis, and, as the Austin Company has made the car a four-seater only it is fairly evident that four is their conception of a proper load. At the same time, the engine, as we proved to our own complete satisfaction, is of ample capacity to deal with

an extra person; and it might be regarded as an improvement if a few more inches of width were allowed in the rear seat.

There is just one more point. The equipment is complete in the modern sense of the word, and of first class quality, and yet does not include a clock. While we are only too painfully aware of the rapidity with which the addition of first one and then another item, each small in itself, runs up the total cost, we are rather inclined to regard a clock as an essential item. However, in this matter also we must allow the makers to know their own business best.

In regard to the other items of the equipment, only praise can be given, and this is particularly so in connection with the C.A.V. electric starter. The weather during our temporary possession of the car was really cold, and it was put up each night in an unheated garage. Nevertheless, the car started up in the mornings at the first depression of the switch—a merely momentary depression, by the way—the only measure taken to secure such easy starting being the usual carburettor flooding and partial obstruction of the Zenith air inlet.

The coachwork and general disposition is almost identical with that of the Austin twenty. The well-known and ingenious attachment of the front seats,

the situation of the tank orifice and fuel gauge on the floor beneath the driver's seat—and, in fact, the general appearance of the one is scarcely distinguishable from that of the other. This is the more interesting in view of the fact that the many improvements that have been made in the larger car since its introduction—notably in the matter of "finish"—are present on the new model, which thus has the benefit of much road experience with its bigger sister.

The car has every justification in claiming "all weather" virtues, for the hood when erected proves to be of the modern type with side curtains opening with the doors. This effect is gained by the use of four curtains only, which are not only capable of being put into position by a child, but cannot be confused with each other. The greatest possible area of mica is provided, and the interior of the closed car is admirably light. We have a strong objection to anything in the shape of enclosure for every-day motoring, and we must admit that we drove without protection through the preliminary stages of a snow storm rather than erect the Austin hood. Conditions became worse, however, and our passengers insisted. The process, although we had never operated this hood before, did not take more than a couple of minutes, and the

interior of the car proved to be so warm and comfortable, and yet so light, that we regretted our previous obstinacy. A good feature, by the way, is that all the curtains have a flap through which a hand and arm may be projected for the purpose of signaling to other drivers. The flap may be clipped shut when not required.

Altogether, the new Austin model is worthy of the great name it bears. It is a car of considerable capabilities that is economical to run and maintain; it is of good appearance and yet is comparatively inexpensive to purchase, and is a real pleasure to drive.



The instrument board and controls of the Austin Twelve. The gear and brake levers are more readily accessible than is usual in centrally-fitted cars. There is, of course, a door giving access to the driver's seat.

I C H A B O D !

*Departed is the Glory of the "Good Old Days" and the Care-Free
Gaiety of Pre-War Cambridge.*

TAXATION and war have laid a heavy hand on many cherished institutions, and a visit to Cambridge suggests that the University Automobile Club is numbered among the sufferers. Motor-bicycles and light cars may still be seen in droves—most men's gratuities could run to one of these; but gone are the Behemoths of other and happier days, gone from their last fastness. With them, it may be, has disappeared something of the care-free gaiety of the pre-war undergraduate, for the popular press notes the "steadfast and purposeful mien" of his successor, and 'Varsity tailors shake their heads.

Never, perhaps, in the whole realms of motordom was quite such an irresponsible club. Youth and high-powered cars must needs be served, and the results of the combination were often surprising. It once occurred to two members lunching in Trinity that a race to the station and back might be an agreeable relief to the tedium of a Sunday afternoon. No sooner said than done. Starters and timekeepers were appointed and the cars, both of which had figured in classic events, lined up in approved manner. A moment later the profundities of the University sermon were shattered by the roar of two open exhausts. Nimble citizens skipped right and left as the cars shot down King's Parade, skidded two corners and held a devastating course down Hills Road. Here this little *affaire sportive* came to an untimely end. Outraged Law extended a massive white-gloved hand, and the sequel is police-court history.

The Club's connection with the Law was a close one, and the court at the top of Castle Hill became quite a well-known venue for its members, who contributed largely, albeit unwillingly, to local revenues, to say nothing of further donations to the University chest at the invitation of the proctors. The hearts of Cambridge magistrates held no soft spots

for motorists. No bench had a loftier sense of the dignity of their office and no bench had better cause for vigilance in the preservation of the same.

On one occasion a highly respected member was assisted through his ordeal by the presence in court of upwards of forty sympathisers. In a tense hush preceding the passing of sentence accused and party with one accord whipped out monocles, affixed them with military precision, and ogled the worshipful functionaries before them. The effect was paralysing, but when it wore off the bench's opinion of this levity was crystallised in the fine.

Another prominent sportsman, whose notions of time and space were nearly as subversive as Einstein's, drove up to the rendezvous to find that friends had spread a Turkey carpet and formed up on either side in the manner prescribed for a totally different ceremony. Again the majesty of the law was vindicated.

Cambridge in those days must have been a gold mine to dealers in a certain type of car. A venerable Mercedes with a bonnet the size of a pantech-nicon and outside exhaust pipes would always sell on sight. Besides these there was usually in residence a number of cars whose paces did not belie their appearance—"four-inch" Darracqs or Metallurgiques, or an "also ran" in a great Continental race. A sensation was caused at one hill climb by a Delage, fresh from the laurels of the Grand Prix. Hill climbs and speed trials were held at frequent intervals, and no spectator in search of thrills ever came away disappointed. Reliability trials were less popular.

Let it not be supposed that the Club's sole concern was speed. Somebody groping in a stable yard once discovered a veritable $2\frac{1}{2}$ h.p. Benz, with belt drive and tube ignition complete. For a wager of £20 he undertook to drive the relic to Newmarket and back within a day, and members turned out in full force. The twelve miles out was accomplished in five hours. Elated by this creditable per-

formance, the driver expended some of his prospective winnings in an elaborate luncheon, which delayed the start till 3 p.m., and so contributed to his own undoing. A trifling derangement of the tube ignition wasted two hours more. Night closed on a pathetic picture. The desperate chauffeur, the jeering spectators, and the wretched old chariot, now goaded into an amble, now wheezing herself to a standstill. Behind strolled a gloomy mechanic, gathering up bits of machinery. On the stroke of midnight two bedraggled objects crawled into college. The Benz rested her weary bones on the Newmarket Road.

Sometimes Alma Mater came to the rescue in unexpected ways. One member, blithely speeding through Trumpington, had the ill fortune to hap upon a herd of bullocks. The net result was the demise of three of them. It was an awkward predicament for the driver, for he was not insured, and the farmer had a prejudice for cash transactions. He sat down to dinner in hall in pensive mood and addressed himself to roast beef. Suddenly it struck him that beef, in one guise or another, figured on the menu with unfailing monotony. The college must use a lot of beef! The steward, on being approached, confirmed this supposition; and eventually, to everybody's satisfaction, the defunct bullocks were purchased on behalf of the college kitchens.

No; Cambridge stands not where she did. It may be the burden of proctors and police is lighter than of yore; but one may be pardoned for contemplating the changes with a sigh.

The Board of Trade has been for a long time considering the question of bringing all types of self-measuring pumps under the control of the Weights and Measures authorities. Since the petroleum companies have taken the distribution of these pumps in hand every effort has been made by them to this end for the benefit of the public.

QUOD ERAT DEMONSTRANDUM.

THEORY — AND PRACTICE.



1. "Not bad, not bad at all, but you are entirely at fault in your hypothesis. Permit me—"



2. "To demonstrate my meaning. In the first place, the hands should be raised thus to protect the cranium, and the elbows lowered to guard the torso."



3. "The blow should then be delivered so that the point of impact is in the mathematical—"



4. ! ! ! !



5. ! ! ! !



6. "My dear sir, you have also made the mistake of blowing the bag up too tight."

Æ S O P A T I T A G A I N .

Blessed is he who Expecteth Nothing, for that will be about the Size of his Portion.

THERE was an Autoist once whosuffered from Perturbation, complicated by Enthusiasm in its most Virulent Form. He did not know how to Let Well Alone, and had forgotten that Dogs lie in their Sleep. His was a Bad Case.

He rejoiced in the joy of Ownership and knew Pride of Possession to the Full. But he didn't know when he was Well Off. He had a Passion for Tinkering. His Auto was Good For twenty and five Ems Pea Gee, but he Wanted More. He was a collector of Ems, and especially of the Pea Gee variety; and all Collectors are Greedy. Twenty and five was Not so Bad, but he Wanted More.

So he Tinkered. And he listened to the wise sayings of the Publicists—and he read their Writings. Lord, how he did devour their Writings! He thought to profit him by the wisdom of the Publicists. His was a Bad Case.

Said he, relieving a trifling irritation of the scalp by gently massaging the Affected Spot with the Tip of a Digit: "This Rag de Elliv Namroned doth promise twenty and two per cent. more Ems Pea Gee if I do but use a smaller jet. I must Look into This." He looked in, and it Was So. And his Auto presented him with thirty and one half Ems Pea Gee. For a time he was happy, for, expecting much, he had received more than his portion.

But the time came when he read the writings of the Publicists more Avidly than Ever. "The Thermal Efficiency of the Petrol Engine is very low, is it," quoth he. "Then with a little care perhaps I can Better It. Perhaps there are some more Ems Pea Gee knocking about Loose and Looking

for a Home. What saith this man de Fegs?"

Now de Fegs had stated publicly in a journal of the time (in which also Rag de Elliv Namroned Wrote his Piece) that the Autoist could Effect an Economy of ten Per Cent. did he but Switch Off at the top of every hill down which his chariot would Run Free at Twenty.

And this Autoist tried it, and again it Was So.

So he had thirty and three Ems Pea Gee and Then Some, and was so Perky About It that he made himself a Public Nuisance, and had to be Choked Off, lest he should spread infection.

This Got his Goat. "Jealousy makes 'em spiteful," said he to his Woe-and-Strife. "I'll give 'em something to Talk About." For he had once more taken to conning the news-sheets and the Publicists had got him in their toils.

"The Remlap tyre," he Chortled, "will give me another ten Per Cent. That's the Stuff to Give 'Em."

Of course it Was So, and his collection then amounted to All But thirty and seven Ems Pea Gee.

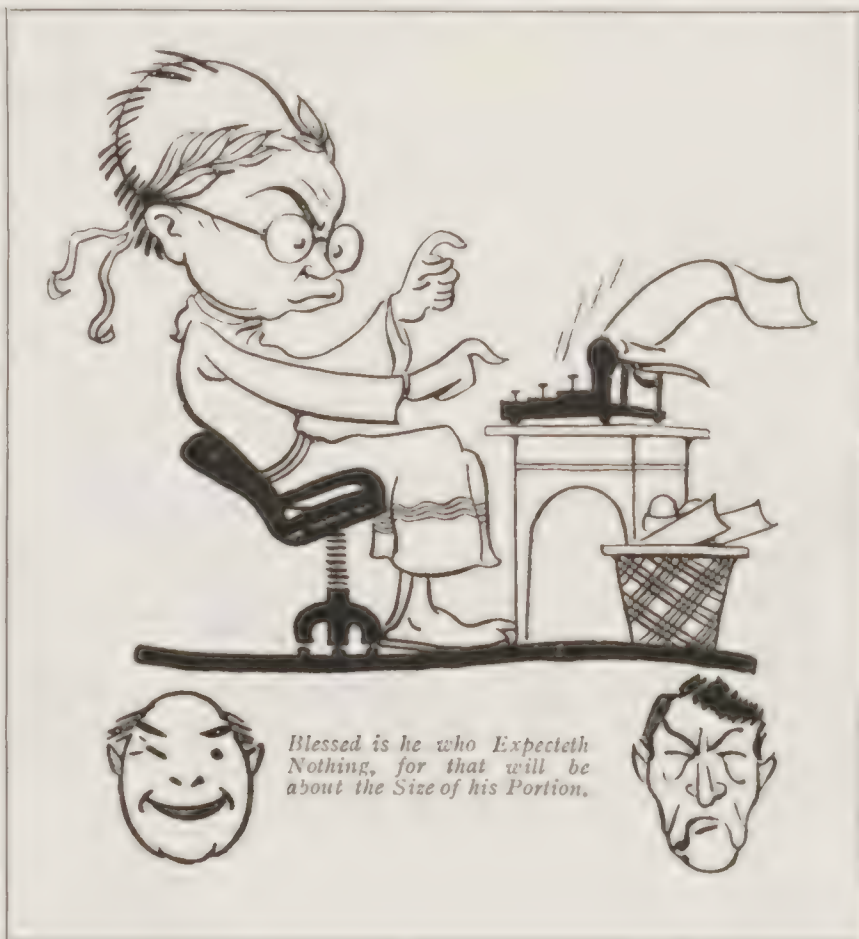
Thereupon he Blossomed Forth—"What do you think of my Thirteen-point-Nine?" he asked All and Sundry. They both told him what they thought of it. They told him what they thought of him. They told him where he could send it, and to be sure and go with it. And he needn't come back. He was not to worry about his Woe-and-Strife and his little Three-plain-and-two-purl—they would be All Right. They would be better off.

Not being blessed with a sense of humour, he Took it Hard. "Must I then gather Ems at the Cost of Popularity?" he asked himself. "Then indeed will I Go Out After them, even unto the last Em. I will not rest until I have an Hundred! My Life's work shall be to justify the Sayings of the Publicists, so that they may Reap the Doings."

But Thirty and Seven is a Long Way Off an Hundred, and he had resource to much massaging of the scalp with all eight Digit Protectors before he Saw Daylight. This was the one friend that clove to him in adversity.

"Daylight," he said with Empressement, "I must have an Hundred Ems Pea Gee, and but Thirty and seven are mine. What are you going to Do About It?"

"Eh mon, but What's it Wairth?" asked Daylight, who came fra north o' the Tweed, although you'd never Guess it. "Well," said the Autoist, "the thirty and seven have cost me the best part of my popularity, so how about the Remainder for the Rest?"



AND EXACTETH RETRIBUTION.

"It's a Do," said Daylight. "Now lend me your ear. Hae ye hairrd o' a carburetter ca'ed th' Yroged. It'll gie ye anither thairty Per Cent. That'll be forrty and seven Ems Pea Gee ye'll hae, n'est-c'pas. Ye try that the noo, an' if it wairks we'll hae a wee Jock an' Doris—at your expense, min' ye."

The Autoist acquired a Yroged forthwith, and put himself at the mercy of his local Motor Bandit. "What do you think of my Thirteen-point-Nine?" he asked as Usual. "I'll give you a hundred and fifty for 'er," said the Bandit with great Promptitude and not enough Tact to put on a threepenny-bit.

"What," said the Autoist, "and she's good for forty and seven Ems Pea Gee any old Day of the Week. I don't think. I wouldn't part with her for a thousand." "You wouldn't," said the Bandit. "In fact you Would Not. Not in These." And he Got on with the Job.

Eventually, that is to say, in Due Course, the Autoist Got her Back. He proceeded with Great Elan to Try her Out. "Now I ought to get forty and seven Ems Pea Gee," he Muttered. "Let's see." And he Joined the Multitude journeying upon the great highway that reacheth even unto Portsmouth. At the Robin Hood he thought All goes Well, she runneth most smoothly and hath Plenty of Ginger withal! At the Bear he Confirmed it. The White Lion but Strengthened his Opinion, and the Talbot made him Doubly Sure. He passed the Angel, and she Positively Purred, so he thought he would Try the same Stunt at the King's Arms.

"All this on one gallon," he said. "Gee, that's Going Some." And she Pulled like a Good'Un right up to the Bol à Ponch du Diable, whereat he thought, Good old Daylight! He knows how many Beans make Five. However, to cut a Long story Short, she Spluttered herself to a Standstill, or in the Stilted Phraseology of the Poets, petered out, outside the Anchor at Liphook. "Just forty and seven," he said. "I must see if I can't do something to improve on that."



"This Rag de Elliv Namroned doth promise twenty and two per cent. more Ems Pea Gee. . . ."

So he put her Away and sought again the wisdom of the Publicists, not being able to See Daylight. The first thing that Caught his Eye was a Contraption that would make his engine Run on Water. "My luck's In," he thought. "The Knil is the Accessory for me. Thirty and seven-point-five per cent. is seventeen-point-nine-eight—nearly sixty and six Ems Pea Gee. I'll get one Toot Sweet." He got one, and it Was So.

He ventured again among his kind, and Fired his Slogan. "What do you think of my Thirteen-point-Nine?" he asked. "Ain't she Some Bus.

Sixty and six Ems Pea Gee do I get Out of Her." They treated him with Silent Contempt, so he left them To It, and returned to the writings of the Publicists, of which he had a Goodly Store. His Bitter Half was Not Nice about it.

"How can I keep the place tidy when you litter it up with this Nasty Rubbish." That was her Feeling in the Matter. However, it were easier for a Rich Man to Pay his Way these days than to shake the Autoist in his Infatuation.

But it was a Tidy While before he could get any further Help in his Chase of the elusive Ems Pea Gee, until at last he Came Across an announcement Tucked away in a Corner. "Air," he thought, "that sounds Promising. The Yrret extra air valve. Now if I burn air with the Yrret and water with the Knil I can't use so much Llehs. And the less Llehs you burn the more Ems Pea Gee you get. That's the Essence of Simplicity."

So he added yet another unto the Gadgets, beneath the weight of which his chassis was taking S-Bends, and again he Tested her Out. The Yrret people promise forty Per Cent. increase, he told himself. "That'll give me Pretty Near the Hundred. Perhaps they'll listen to me then. But an Hundred Ems Pea Gee I must have before I can rest."

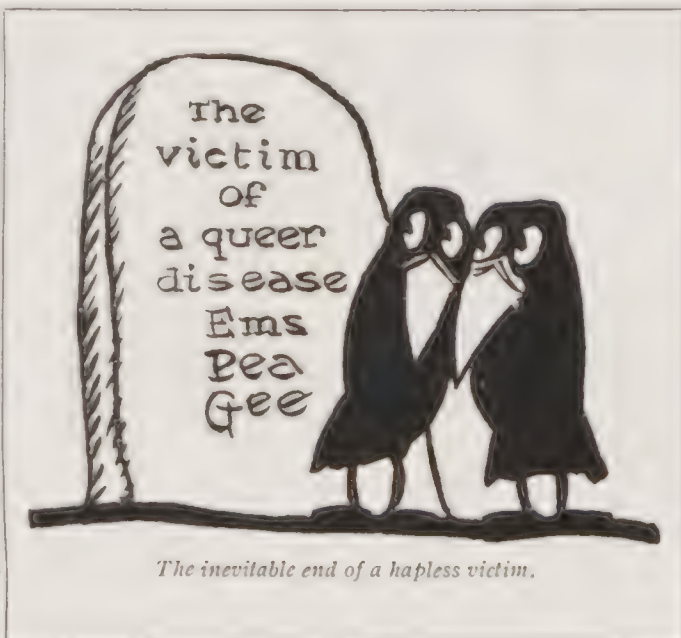
He got his Forty, but when he found he was still seven-point-six-seven Ems down he Burst into Tears. "I want an Hundred," he sobbed. "I must e'en renew the search, for Nearly is not Quite, and ninety and two-point-three-one is not Good Enough."

* * *

But the Lesson is Read. The Autoist never Roped the last few Ems Pea Gee. His missus at this Point thought it time to Take Action, and having wangled the Monicas of two Bone Carpenters, she had him Put Away.

He is quite well, but thinks he is an Em Pea Gee intent on Eluding Capture, and gives vent to Cacophonous Cachinnations. He has Got His.

R. W. B.



The inevitable end of a hapless victim.

AN EFFECTIVE SPLASH PREVENTER.

By "The Motor-Owner" Paris Correspondent.

A French Invention which Saves the Clothes and Temper of Pedestrians.

AMONG the many improvements in connection with the conduct of street traffic which Parisians are pressing upon the authorities and which formed subjects in the deliberations of the City Council a few days ago there was a proposal that, for a commencement, all the vehicles of the city authorities should be fitted with "Splash-preventers." The chief of police, M. Leullier, supported the proposal and added that he would himself at once have a suitable appliance fitted to his own auto. The question is one that has been in the Council's hands for a long time. Just a year ago there was considerable activity on the subject and exhaustive trials of appliances were made in December, 1920, when it was conclusively demonstrated that effective appliances existed which would prevent the inconvenience of pedestrians being splashed from head to foot by passing vehicles on dirty days—to say nothing of the saving in cleaning the fronts of houses and shops along the routes.

In March, 1921, there were trials of a similar nature conducted by the Borough Council of Camberwell (London). Apparently the results were not considered sufficiently satisfactory to warrant compulsory measures being decided upon, although the same inventions which had shown themselves so satisfactory in the Paris trials had been tested at Camberwell. The judges, for example, reported that the tests were "not satisfactory, and none qualified for favourable recommendation." This particular result was certainly in direct contradiction to the results attained at Paris, where at least two different competitors gained very high appreciation. What is more, the majority of Paris omnibuses are to-day fitted with one of the appliances which showed itself efficient. The model which was practically the same and gained second place differed only in mode of attachment to the wheel.

Readers who come to Paris from time to time will have in mind the little square appendage which hung from each wheel of the omnibuses as a splash preventer. In its day this appliance was remarkably effective. It had one or two small drawbacks, but anyhow it was simple, easy to attach, and not liable to get out of order. The new invention, which has latterly been attached to the omnibuses, is exploited by a limited company under the direction of the inventor himself, Monsieur F. Menu. As the appliance when fitted does not lend itself to being photographed in such a way as to show clearly how the splash is prevented I have made a sketch of the detail. It will be noticed that the section shows how a rim of rubber is attached in close proximity to the side of the wheel. This rim was at first made quite flat—but it was found that the mud was thrown up too much amongst the spokes. Mr. Menu then applied a concave rim of rubber, which I have tried to indicate in my sketch, and this rim is fitted to the spokes of the wheel. Several variations of the mode of fixing have been tried but it appears to be immaterial, except,

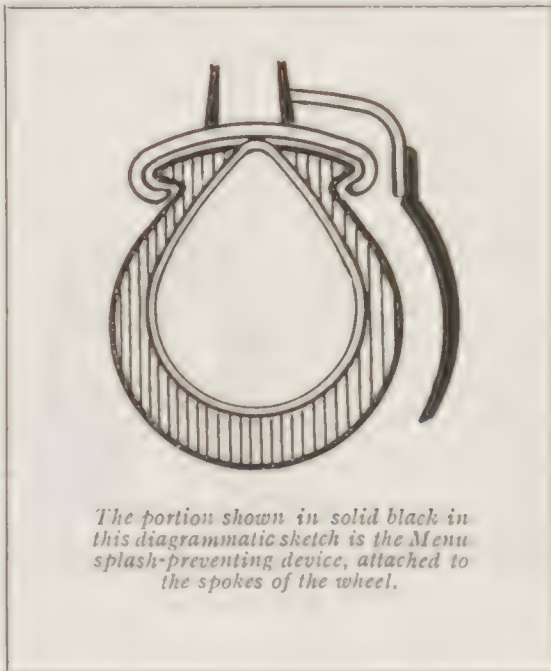
perhaps, affecting the cost slightly, what form of fixing is employed, the essence of the invention being that the flat (or concave) rubber ring takes its place alongside the wheel at a distance of an inch or so.

When the car runs up against the kerb the rubber ring "gives" just sufficiently to avoid any breakage. Its points may be summarised: (1) Effective in its work; (2) durable; (3) easy for application to any wheel; (4) light and inexpensive; (5) not in the least unsightly.

One of the exterior boulevards was elected, well watered and "muddied" for the occasion. A passage was formed by boards to a height of about 4 ft. 6 in., covered with white oil cloth, and so spaced as to leave about a yard on either side of the vehicle which had to run the gauntlet of the "passage." Points were awarded in proportion to the height to which mud had been splashed by the competing vehicle fitted with an appliance to each wheel, and the car travelling about 30 miles per hour.

Two entrants were for Mr. Menu's appliance; a third, by Mr. Brunswick, for a very similar fitting (as already mentioned), and three others nearly similar, by Messrs. Malraux, Bouillet, and Bondon. Three competitors were of the type formerly in use—a sort of square protector hanging from the hub of the wheels—varied in detail by the manner of fixing and the arrangement for preventing the appliance swinging about when the car was running. These were presented by Messrs. Gardet, Oger and Fumat. Two other appliances took the form of a large circular brush, presented by Mr. Troude and Messrs. Chapelle and Jabouille. The appliance of Mr. Treboscen-David partook of the nature of a shield with a gutter which conducted the mud to the rear of the wheel, whilst a peculiar attachment presented by Mr. Henry utilised the exhaust gases for "blowing" at the wheel just at the point of contact with the ground.

E. D.



The portion shown in solid black in this diagrammatic sketch is the Menu splash-preventing device, attached to the spokes of the wheel.



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A TOUR IN HARDY'S COUNTRY.

An Attractive Programme for a Few Days a-Wheel in Wonderful Wessex.

Written and Illustrated by Clive Holland.

JUST as leafy Warwickshire possesses attractions for motorists which are quite outside its rural beauty, charm and historic interest, and are inseparably connected with the greatest of our dramatist poets, Shakespeare, so does the land of Wessex, more commonly known as the county of Dorset, possess a special lure because of its connection with the greatest of our living novelists. So intimately, indeed, have the novels of Thomas Hardy presented this delectable portion of the south-west of England to the reading public that Dorset has come to be known as "the land of Thomas Hardy," and the novelist himself as "the wizard of Wessex," though we dislike the term.

Mr. Hardy lives in the heart of the country he loves so well, for the quaint little market town of Dorchester is in more ways than one the centre of the life of the Wessex he has so lovingly and vividly described in his novels and poems. "Max Gate," his home, lies a mile or so outside the town on the site of a Roman villa—for Dorchester was fifteen hundred years and more ago a Roman settlement—and is a spot to which many pilgrims come during the year—Americans in large numbers—admirers of his poetry and romances.

The borders of Wessex, a land that even the Great War touched less adversely and less chaotically than many other parts of England, are within a good, long spring day's run of town. A week will serve to make one well acquainted with the beauties of the countryside, to allow one to visit a number of picturesque and interesting towns and villages, and to see a number of the places which, under thin disguises, appear in the wonderful series of "Wessex" novels and tales that have come, all too infrequently, from the pen of incomparably its greatest literary son.

It is more than likely that nine

out of ten motorists who are bound from London or the south-eastern counties will pass to Wessex through the exquisite scenery of the New Forest, in which Hardy laid one poignant scene of his *Tess of the D'Urbervilles*, and thence through Bournemouth, where another tragic scene, the killing of Alec D'Urberville, is played in a boarding-house named "The Herons."

Poole (Havenpool*), a busy seaport with much history, is but just over the Hampshire border; from hence a pleasant run may be taken into the south-eastern corner of the Hardy Country to Wareham (Anglebury), which appears in *The Return of the Native* and other stories. A quaint and sleepy town with memories of Judge Jeffreys' "Bloody Assize," and on to Corfe Castle (Corvesgate Castle), and Swanage (Knollsea), both typical of Wessex scenery and life, and described in *The Hand of Ethelberta*.

North-westward from Wareham,

* The names of places as they appear in the novels are placed in brackets.

and one has a stretch of delightfully rural scenery in the pretty valley of the Frome, and at the same time come into the very heart of the country described with such loving fidelity and in such exquisite word pictures in the tragic epic *Tess of the D'Urbervilles*.

The road winds through and above the meads that Tess and Alec D'Urberville and Angel Clare knew so well, until one comes to Wool (Wellbridge), a tiny hamlet of a hundred or two inhabitants set on the edge of the sinuously winding Frome which meanders crystal clear amid the lush fields of rich meadow grass and rushes. This place, with the ruins of Bindon Abbey, set amid rook-haunted elms and beeches, and the old Manor House just across the grey stone Elizabethan bridge is inseparably connected with the tragic story of Tess.

No village of its size in Wessex has had more visitors upon literary pilgrimage than Wool. No manor house has such fearsome memories. One may doubt that the D'Urberville spectral coach crosses the ancient bridge each Christmas Eve, and draws up at the gate in the wall surrounding the house: and that, if it does, its appearance presages evil in the shape of death to some one dwelling there. But of the sinister impression the house gives at dusk on a winter's afternoon one can speak from experience, and if one views the famous mural paintings, so vividly described by the novelist, under such conditions one can easily sense the terror they inspired in poor Tess herself.

Northward, across Bere (Egdon) Heath, which figures in so many of the novels and tales, and stretches in an almost unbroken line from Bournemouth to Dorchester, and one reaches the quaint little townlet of Bere Regis (Kingsbere), in whose interesting church lie buried the ancestors of Tess and her family in an ancient vault.



A typical Wessex village.

INJUDICIOUS RESTORATION.

Towering above the village street stands Woodbury Hill (Greenhill), with its steep sides broken by clefts and ridges, and the summit reached by a road that always seems dusty. It looms largely in *Far from the Madding Crowd*, and it was at the annual fair held in September that Bathsheba Everdene met Troy. Along the road to Dorchester (Casterbridge) are to be found many scenes from the Wessex novels and tales. One passes through Puddletown (Weatherbury), with its crooked street and ancient church containing fine canopied alabaster tombs, well worth half an hour's pause. The church, once one of the finest of its kind in Dorset, has unhappily been much and injudiciously restored, and a good deal altered, but devout Hardy pilgrims will be able to see the "little gallery door" through which Sergeant Troy entered the church on the west side of the tower.

Near by Puddletown are many spots of literary interest, including Troytown, a roadside hamlet consisting of a handful of cottages at the foot of Yalbury Hill, known in the novels as "Roy-town." The Hill, though mentioned in *Far from the Madding Crowd*, plays a more prominent part in *Under the Greenwood Tree*.

Many, ere taking the long stretch of road and crossing the three-arched Grey's Bridge over the river, which leads up into Dorchester, will make a detour to Upper Bockhampton (Upper Melstock), where stands the large and picturesque thatched cottage in which Mr. Hardy was born, tree-environed, and standing below the stretch of moorland on which he was so fond of rambling as a boy.

To study the locale of *The Mayor of Casterbridge* thoroughly is not difficult, and to do so brings one into touch with many picturesque spots and interesting places, including Weyhill (Weydon Priors), Bridport (Port Bredy), that historic and interestingly picturesque little seaport, and Blandford (Shottsford) lying north-east.

Few will leave Dorchester with-

out taking a look at "Max Gate"; the great Roman amphitheatre, where Henchard met his wife; the gaol, which had so strong an attraction for the future novelist in his boyhood days, when there was an execution taking place; Colliton House (High Place Hall), the home of Lucetta; and Mill Street (Mixer Lane), which Mr. Hardy describes as "the Adullam of all the surrounding villages," and goes on picturesquely to add that the Inn called Peter's Finger was the church of Mixer Lane." The inn has disappeared since Mr. Hardy wrote his novel. Mill Street, though much altered since the times depicted in *The Mayor of Casterbridge*, is still a

spot of some interest to Hardy pilgrims.

From Dorchester a pleasant day or two can be spent in the country of *The Woodlanders*, which lies chiefly in the northern part of Dorset, and in and around the picturesque and famous Blackmoor Vale. It is a region of considerable variety in its scenery, beautiful woodlands, wide open commons, grassy uplands, and here and there boggy stretches of marshlands. The motorist who wishes to follow up some of the romantic scenes and "trails" of the novel will have to leave the two main roads, Dorchester to Sherborne and Dorchester to Yeovil, and follow the many narrow by-lanes which connect the villages of the story.

The principal action of the novel takes place in the district that Mr. Hardy calls the Hinctocks. This may be said to include Hillfield, Middlemarsh, Minterne, Melbury Bubb, and Hermitage. Sherborne (Sherston Abbas) with its famous school and abbey, and Cerne Abbas (Abbot's Cernel) are worth seeing, quite irrespective of the Hardy interest.

In Revel's Farm one may imagine we have the Revellers' Inn of the story, on the way

to which Tim and Suke and their wedding party met Fitzpiers.

Milton Abbey (Middleton Abbey) comes as a surprise to the wayfarer in Wessex, for it seems strange to find this imposing and ancient building of Saxon foundation amid such truly rural surroundings. The house which stands close beside the church was the place of Mrs. Charmond's stay.

Sherborne is a delightful old town, with many survivals from bygone ages, and a remarkably fine abbey church. One may put up at the Digby Hotel and identify it with the "Earl of Wessex" of the story, and in the market-place seek to locate the spot where Giles Winterborne stood under his sample apple tree.

The Abbey church is an interesting building in several periods: Early English, Decorated, and Perpendicular. For three



The "Kingsbere" of "Tess."



Cranborne Chase ("The Woodlanders").

THE SHADOW OF "BONEY."

hundred and seventy years the town was the seat of the bishopric, which embraced Somerset, Dorset, and a portion of both Devon and Wilts.

Although it is a climb, High Stoy should be visited whilst in the neighbourhood. From it on clear days there is a magnificent and unrivalled prospect of the surrounding country.

On one's return to Dorchester on the road to the country of *The Trumpet Major* and *The Well Beloved*, a day or so should be spent in and around the villages of Upper and Lower Bockhampton, Stinsford, Bere (Egdon) Heath, Yellowham Hill (Yalbury Hill), the locale of *Under the Greenwood Tree*. Thence to Upwey, where, at the foot of Ridgeway Hill, stands the "Ship," at which Dick Dewy and Fancy Day had tea after their meeting in Weymouth (Budmouth Regis) at "the corner of the front street . . . at which point the angle of the last house in the row cuts perpendicularly a wide expanse of nearly motionless ocean."

Perhaps the most interesting romance of Mr. Hardy's to the "general reader" is *The Trumpet Major*, the scenes of which are chiefly laid in Weymouth (Budmouth Regis), Portland (The Isle of Slings), Sutton Poyntz (Overcombe), and Bincombe. The story is concerned with the stirring times in this south-west corner of Wessex, when the shadow of the great Napoleon lay across Europe, and the invasion by him of these shores was looked for almost hourly. The scenes of the arrival of the defending troops on the great down near where the white horse is cut in the turf; life at the watering place which King George was to make fashionable, the hasty comings and goings of folk about the Court, and the stir the "sojers" created in the villages round about are all depicted with a master pen, and linked and bound up with these happenings in an interesting love story.

Hardy enthusiasts, and others in search of the picturesque, who wish an extended tour can go far

westward into the country of *A Pair of Blue Eyes*, and find themselves in Launceston (St. Launce's), Camelford (Camelton), St. Juliot, Pentargar Bay, Boscastle (Castle Beterel), and the delightful scenery of the Vallery Valley. The foundation-stone of the new portion of St. Juliot's Church, it is interesting to note, was laid before her marriage by the first Mrs. Thomas Hardy, who at the time lived with her brother-in-law and sister at the rectory. It is generally supposed that the character of Elfride in the novel was largely a study of Mrs. Hardy, though the events of the story are, of course, fictitious.

One may well on the return journey

strike Taunton (Toneborough), Ivel (Yeovil), and Sherborne, and, by travelling down the picturesque valley of the River Stour, pass through the country of that romantic and even fantastic novel, *Two on the Tower*, the chief scenes of which are laid in Charborough Park, Charborough House (Welland House), Milborne St. Andrew, Wimborne Minster (Warborne), Winterborne Zelstone (Little Welland Village) and Salisbury (Melchester).

Those of our readers who have followed the itinerary thus briefly sketched out will have had an enjoyable tour in delightful country, and perhaps have acquired some knowledge of the atmosphere of Wessex, which will give added charm to any future perusal of Mr. Hardy's novels, poems and romances.

A visit to Portland enables one to visualise, while standing at the Bill of Portland, Ann Garland, as she stood there to catch a last glimpse of the *Victory* making down Channel with her lover, Bob Loveday, aboard.

On Portland, too, we are amid the scenes of Mr. Hardy's most fantastic and illusive story, *The Well Beloved*. The island, Mr. Hardy rightly claims, is the "home of a curious and well-nigh distinct

people, cherishing strange beliefs and singular customs now for the most part obsolescent."

On the whole *The Well Beloved* is a sombre tale. It could scarcely be otherwise, for the setting is hard and the locale sombre. The Caros' cottage home is still standing, "all of stone," like the island itself. And hard by is the home of Marcia Bencombe, Pennsylvania Castle (Sylvania Castle), built by a grandson of the founder of the State of Pennsylvania. The island and its dour but impressive scenery is worth a day's exploration, although the motorist will be well advised on the whole to do this afoot. Rufus Castle (the Red King's Castle), or Bow and Arrow Castle, Sandsfoot Castle (Henry VIII.'s Castle), Cave Hole, and the "Street of Wells," and sinister "Deadman's Bay" are all worth seeing.



The village of Corfe Castle ("The Hand of Ethelberta").



A typical Hampshire lane.

C O U N T R Y R O A D C L U B S .

An Admirable Scheme to Improve Touring Conditions.

IT is to be presumed that any opinion upon the great and ever-present "hotel question" is based upon the holder's personal experience. As personal experiences with hotels may be as varied as they are with tyres, it is not remarkable that there should be considerable diversity of opinion as to whether the average British hotel standard of comfort and reasonable charge is good, bad or indifferent. It is not necessary here to express a view one way or the other, but one may say at least that the misfortune which has obviously visited those who run down the present system may visit their opponents in the controversy at any time.

That, in our view, is the worst feature of the situation. One cannot be sure, on commencing a tour, of always securing a reasonably comfortable night's lodging, not to mention a well-cooked dinner. By exercising discretion in the selection of recommended hotels only—Trust Houses or otherwise—there is a fair chance that the tour will not be marred by nightly discomfort; but even this precaution has been known to fail.

A movement is now on foot that bids fair to remove this difficulty. The Country Road Club has been inaugurated by members of various clubs and associations connected with automobilism with the object of securing altogether more satisfactory touring conditions by the establishment of a chain of comfortable country club houses and club quarters, with suitable garage accommodation, at convenient stopping places on the great main roads of the country.

The first of these Club Houses is in actual operation at Newbury, on the Bath Road, and attractive premises are being secured at Tewkesbury, Malvern, Bath and Kenilworth, while quarters are also being arranged for at Winslow, Stratford-on-Avon, Oxford and Ventnor.

There is, of course, a great deal of work to be done in adapting the various premises for their new purpose,

and as some of them have only just been started, it is impossible to state any definite date for opening, although the Club authorities hope to have reached a practical stage before the coming touring season opens.

As we have said, Ham Manor, Newbury, is in full working order, and, while it is not intended that each club house shall be a replica of the others, after the pattern of certain popular tea shops, prospective members who take a "trial trip" at Newbury will obtain a very good idea of the accommodation and so forth which it is proposed to furnish on a much larger scale in the near future.

The basic idea, carried out to perfection at Ham Manor, behind both the selection and adaptation of the premises, is that the resultant club houses shall be home-like in character, rather than palatial. Our pictures show how excellently this has been achieved in the first club house, so far as interiors are concerned, and some hint is also given that exteriors are to be studied with equal care in order to provide a maximum of comfort and pleasure for members. In the majority of cases there will be delightful old-world gardens with lawn tennis courts, croquet lawns and bowling greens, while arrangements will be made in regard to golf and other country sports and pastimes either in the grounds or in the locality.

Garage accommodation, including a kerbside fuel pump, will be provided immediately adjacent to the club houses wherever practicable, and arrangements are in progress whereby members will be able to secure the conscientious performance of repair work at strictly reasonable charges.

The club houses will be linked together under one central management, and will be run on the lines of old-time country inns, where the best of fare could be relied upon. They will score heavily, however, in the matter of accommodation, which will comprise a spacious reception lounge, ladies' writing and men's smoking

rooms, billiards and card rooms, besides, of course, the necessary bed and dining rooms; and it is intended to equip them with a considerable number of bathrooms.

We mentioned "club quarters," as distinct from club houses, in an earlier paragraph, because in a few cases the proprietors of thoroughly attractive well-managed and approved hotels have expressed a desire to co-operate with the committee in specially studying the needs of motor tourists. In these cases, although the primary object of the committee is to provide club houses for the sole use of members, clubrooms, bedrooms and toilet-rooms have been reserved for their use, and especially moderate tariffs have been arranged.

The annual subscription to the Country Road Club, for town, country or local membership, has been fixed at three guineas, subject to a rebate in the case of two or more members of the same family being elected at the same time. It should be understood that the payment of a single subscription entitles a member to the full use of all the club houses when the chain is completed. Incidentally, as the organisation is essentially a family touring club, the privileges of the club will be extended to guests when accompanied by a member, who will be entitled to introduce a maximum of three guests at a time, for meals only. No one other than a member will be allowed to reside in the club houses.

Members of the R.A.C., Athenæum, Devonshire and similar clubs are eligible for membership, with the approval of the committee, without ballot, but all others must be proposed and seconded by members in the usual way. Full details may be obtained from the secretary, The Country Road Club, 12, Clarges Street, W.1, and we understand that Capt. A. H. Hopkinson, the local secretary at Newbury, will be pleased to show non-members over the club house and its five acres of delightful grounds.

PICTURES WITHIN AND WITHOUT.



The Newbury Club House is set amid delightful surroundings, in five acres of grounds, where there are facilities for lawn tennis, croquet, and the usual outdoor sports and pastimes, including fishing.

Ham Manor is an ideal resting place in summer or winter. At the moment, of course, winter has stripped the trees of their luxuriant verdure, but the interior of the club house is cosy in the extreme, and our upper phot-



The hall, below, opens into two lounges, one of which is the "Garden Lounge," and the other an even more attractive apartment and a feature of the house. It has a striking and unusual colour scheme.

graph is an earnest of the exterior transformation that will take place in a few short months. In the lower photograph are seen the oaken staircase and restfully decorated hall of Newbury Club House.

THE NOBLEST (AND MOST PROFITABLE) SPORT.

By Captain P. A. Barron.

Showing how advantageous it is to "have it where you want it."

DURING THE last few years there has been a revival of interest in the noble sport of boxing. It is difficult to account for the fact, but some high authorities attribute the cause to the ever-increasing strenuousness of modern life. They think that people attend boxing matches in the hope of learning new methods of obtaining seats on over-crowded omnibuses and underground trains, and that they study the physical culture systems of famous fighters in their efforts to acquire those lightning movements by which pedestrians preserve their lives amidst modern traffic.

The theory is, I think, inaccurate. It appears to me that the boxing boom is due to the fact that the ring is the shortest cut to the most lucrative branches of the professions of literature and film-drama. All right-minded youths desire to excel in these arts, which bring both fame and fortune, and they realise that the easiest way to attain their ambition is to put on the gloves.

Many of the best exponents of film-drama to-day are finding that their bi-annual divorce proceedings no longer win them the adoration and affection of the public. Only recently we heard of one who was five marriages ahead of his divorces, yet whose salary as a film star was less than 500,000 dollars per annum. To escape such penury he is now taking lessons in the noble art of boxing in the hope that if he can get knocked out by a really popular fighter he will be able to command a living wage again as the hero of a highly combustible movie drama, water-cooled with modern bathing-scene effects.

Ambitious young men must not think, however, that success is to be attained without careful training and much hard work. They must rid their minds entirely of notions which they may have obtained from obsolete books. In the primitive days of long ago the old bruisers merely studied the art of punching their opponents. Beyond a rudimentary knowledge of the uses of raw beefsteak for the cure of discoloured eyes, they knew very little of modern science.

The modern pugilist, on the contrary, undergoes a course of training in medical matters. He learns a great deal about food values, and is taught to spell such words as "proteids," "albuminoids," "hæmoglobin," etc. Until this part of his training is complete the cash value of any testimonials he may write for patent foods is practically nil.

The testimonial-writing course in the modern pugilist's system of training extends over a period of from six

to twelve weeks, the duration depending upon the aptitude of the pupil. The examination is severe. To qualify, a candidate must be able to compose a convincing testimonial to the virtues of any much-advertised article. He must study the literary style of the masters of the craft.

This branch of the profession is so highly technical that it is impossible to deal with it in detail here. For the guidance of young pugilists, however, it may be pointed out that the following recent examples are regarded as masterpieces:—

WHY I SHALL BEAT BABE BIFFEM.

To the Proprietors of "Throttle" Cigarettes—Messrs. Gasp & Choker, Ltd., Cabbage Court, London, E.C.1.

DEAR SIRs,—It may interest you to know that my astonishing fitness, which has caused so much comment in five continents, is entirely due to

my scientific method of training on "Throttle" cigarettes. While preparing for my great battle with Babe Biffem at the Royal Albert Hall I have smoked every day from forty to sixty of the health-giving preparations manufactured in the model factories of Messrs. Gasp & Choker, Ltd. The continuous inhalation of the gas which emanates from these products has greatly improved my wind, strengthened the action of my heart, and lengthened my reach. I find they also make me insensible to other pain.

I am pleased to note that the price of your stimulating, blood-purifying, and body-building cigarettes remains at 1s. 4d. per packet of 10.



"The modern pugilist...learns a great deal about food values. Until this part of his training is complete the cash value of any testimonials he may write for patent foods is practically nil."

THE VALUE OF IRON AS A TONIC AND A PROTECTION.

including coloured card bearing my portrait, and I am glad also to know that you employ in your factories only ex-soldiers who were gassed in France. It is indeed pleasing to know that the injuries these poor fellows have sustained in the glorious cause render them specially suitable for work in the Gasp & Choker laboratories.

When I knock out Babe Biffem in the third round next Thursday I shall attribute my victory entirely to the beneficent effects of your divine herb.

Yours faithfully,

PICCANINNY PUNISHER.

P.S.—My Manager will arrange terms for this when he calls at your office to-morrow.—P. P.

HOW I SHALL PUNISH THE
PICCANINNY.

Mrs. The Steel Globule Patent Food Co., Ltd., Tomb Alley, Doomsgate, London, E.C.4.

DEAR SIRs,—With reference to the forthcoming contest at the Albert Hall, in which I shall defeat the Piccaninny Punisher, I think it only fair to state that my victory, which will delight the whole civilised world and America, will be entirely attributable to your Steel Globule Patent Food.

The medicinal value of iron has, of course, been known to pugilists and other scientists for many years, but your gifted firm has been the first to reinforce the human frame with the finest quality steel. I can only say that the effect of your new Case-hardened Globules is amazing.

It is well known to students of the Ring that the Piccaninny does not belong to the scientific class of pugilists, of which I am the most notable example. He hooks to the jaw, left swings, heart-jabs and kidney-ticklers are weak. He relies entirely upon blows to the stomach.

Knowing this, my trainer, the genial and ever-popular Mr. Boodlegrab, has concentrated upon the problem of rendering

me invulnerable. In the course of his researches he became acquainted with your metallic dietary system. Assisted by the advice of your experts, he administered your Steel Globules twice daily. The doses were increased gradually, and I now take no other food. In fact, desire for any other nourishment has left me.

I am told that the effect of your Globules, which are non-corrodible, lasts until death, and I consider the price—viz., 4s. 9d. per set, packed in self-ejecting cases and bearing the Government Duty Stamp—is extremely reasonable. I do not think the average person would require more than one set.

My straight tip to all lovers of sport is: Trust Steel Globules and put your shirt on the Human Anvil who signs himself,

Yours faithfully,

BABE BIFFEM.

P.S.—(Not for publication). My Manager will call to-morrow for cheque in lieu of damages, which will otherwise be claimed through the Courts.—B. B.

With these examples before him, the candidate who desires to succeed in the Ring may begin his studies. Mere training by hand-books and pugilistic primers is, however, not sufficient. A professional testimonial-writer should be employed as a coach until thorough efficiency has been attained.

An apt pupil should be able to acquire the language of the Ring in about a year, and at the end of that period should be able to write in a manner quite unintelligible to the lay reader. During this part of his training course he will keep himself in hard condition by daily grammatical exercises. He will learn to split infinitives, support prepositions, mix metaphors, and chase the gerund.

His name will then be entered for the special examination for pugilists set by the Institute of Journalists. The test is severe. He must prove himself competent to write in a "snappy" and spirited style on the following subjects:—

How I Shall Beat John, the Jackson Killer.

Why John, the Jackson Killer, Will Lose.

How I Shall Knock Out the World's Hardest Hitter.

Why John Fears Me.

Secrets of My Success.

How I Lost the Great Fight.

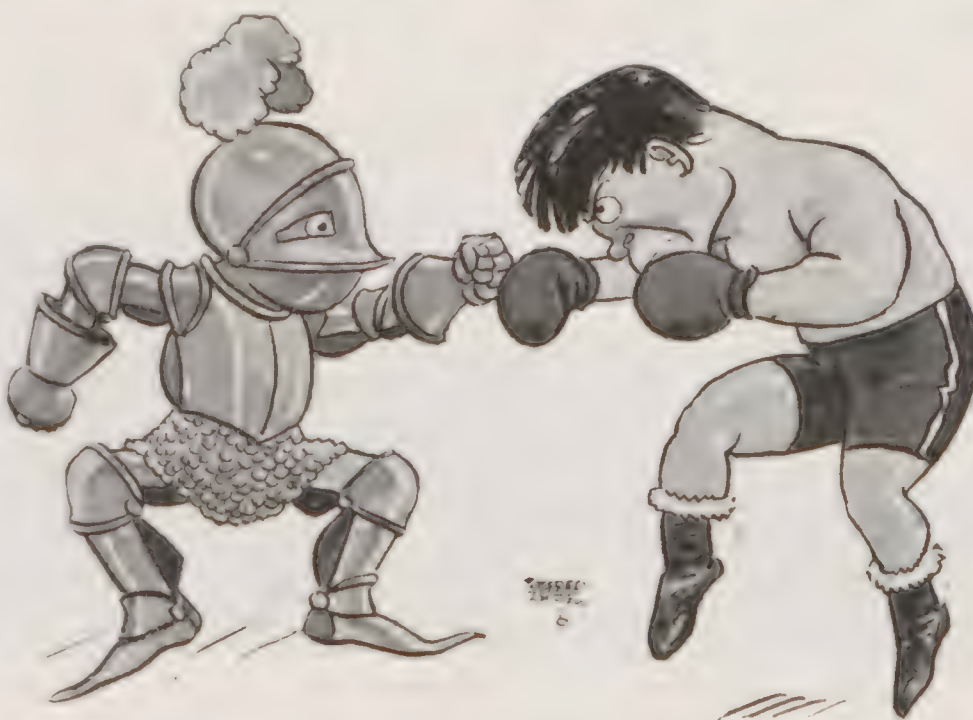
If these articles are considered by a Committee of Sporting Editors to be likely to increase the circulations of evening papers, the candidate may win a scholarship, which usually takes the form of a contract for his literary output during a term of years.

But the most difficult part of the aspirant's training has yet to be faced. This is the course in cinema acting which includes study of the arts of make-up and beauty culture.

Beauty of face and form is absolutely essential if popularity is to be attained. The budding hero must learn to pose for photographs with Grecian grace, and possibly the skin of a very small tiger girt about him.

Boxing is undoubtedly the best profession to-day, and, were it not for the fact that a few unsportsmanlike bruisers cling to the old traditions, it would be the only recognised career for young gentlemen with literary and artistic tastes.

If only the custom of wearing armour could be reintroduced I believe that most of our ambitious writers and film actors would take this road to fame.



"If only the custom of wearing armour could be reintroduced I believe that most of our ambitious writers and film actors would take this road to fame."

AN ITALIAN NEW COMER.

The Ansaldo, a Car Possessing Several Striking Characteristics.

CARS of Italian make have long held a good reputation in this country for their reliability and the soundness of their design, and visitors to the show at Olympia last November cannot have failed to notice that the Italian exhibits were well to the fore in point of progress. One of the latest newcomers to our shores, the Ansaldo, the agency for which is held by Messrs. Watkins and Doncaster, of Great Portland Street, thus begins its career under the happiest of auspices. That it is of Italian nationality holds promise, and that this firm should have accepted the responsibility of agency is sufficient guarantee that the promise is fulfilled in practice.

The Ansaldo is a car of moderate power but ample carrying capacity, and of very moderate price. It has, moreover, many interesting characteristics which one scarcely expects to find on a car of the price and type. The engine bears evidence of having been designed on high-efficiency lines, possessing, for instance, inclined overhead valves operated by an overhead camshaft.

Such features usually carry with them high compression, but in the case of the Ansaldo this is deliberately kept at a low figure in order to secure smoother running and easier handling for touring purposes. Whatever the origin of the engine or the intentions of the designer, we found the car quite unusually lively and powerful, having regard to its cylinder dimensions, while, so far as simplicity of operation is concerned, we were able to

drive the car straight out into the traffic of Charing Cross Road and Oxford Street with as much certainty as though we had already driven it for several hundred miles. Everything—brakes, clutch, accelerator and gears—seemed to be "just right," and, although it may not follow that everyone's requirements are exactly similar to our own, we found the Ansaldo one of the most comfortable and non-fatiguing cars to control in thick traffic of any that we have tried. Remarkably little use need be made of the gear lever—the engine has admirable "picking-up" powers on top gear, as we discovered in the course of the first five minutes at the wheel, and acceleration in general is much better than one would anticipate from an engine of this type.

Altogether we drove the Ansaldo about one hundred miles, much of the distance being in the traffic and tram-lines of outer London, and some forty miles or so on open country roads. On roads which we knew from painful experience with less well-sprung cars to be vile we were astonished at the comparative comfort of this one; and on several hills which have bothered

many a larger car, so far as surmounting them without a change of gear is concerned, the Ansaldo ran steadily to the top at a good pace without labouring and with no necessity to use persuasion.

On level roads the car proved to run quietly and steadily at the average driving pace of the average driver—a speed in the neighbourhood of 30—and to be capable of accelerating well beyond that figure without effort when required. The majority of main road hills are apparently well within its top gear capacity.

From every point of view we should write the car down as ideal for the owner-driver who has not had years of experience. It is devoid of tricks; no special "knack" or skill is required on the part of the driver to obtain quiet gear changes and good results in general—although, doubtless, the greater the skill the better the results—and is of convenient wheel base and track and steering lock for the average purposes of the average owner.

In addition, it is a car of which no one need feel ashamed. It is not finished in a prodigally luxurious style,

naturally, but the coach and paint work are good. The car throughout gives one the impression that it has been made to last, even to outlast a good amount of rough usage; in fact, that it is a vehicle with which "pride of possession" need not be written off at the rate of 20 per cent. per annum. To sum up, Italian engineering work is famed the world over for its quality, and the Ansaldo is a worthy representative of the nation which produced it.



The Ansaldo is essentially a full-sized family car, in spite of its low power and price. The engine is tiny, but the advantage of small tax and economical running is not offset by lack of capability, within reasonable limits.

By Appointment to



H.M. THE KING

THE

Dazzle Problem Solved!

RAPSON "DIPPING" HEADLIGHTS FOR ALL!

Another amazingly simple invention from Lionel Rapson, which reduces the price from £20 to £5!

By Appointment to



H.R.H. THE PRINCE OF WALES



"PLEASED TO MEET YOU!"

RECIPROCATED COURTESY: Instinctive action of old gentleman, who courteously bows to motorist who has lowered his headlights.

AS USED BY

H.R.H. The Prince of Wales.

H.R.H. The Duke of York.

The Prime Minister, etc., etc.

Universal Model.

*Vide Mr. W. HAROLD JOHNSON
Motor Editor "COUNTRY LIFE."*

"If Rapson Dipping Headlights were universally used, danger from dazzling headlights would be rendered definitely impossible, while the efficacy of the lamps is in no way impaired. For driving in fog the device is ideal, because it removes from the front of the car that bank of reflected light which is the chief danger from which he fog-bound motorist suffers."

Complete set, in black enamel, ready to attach to existing brackets, with "Bowden" wire driving seat control lever.

£5!

Model-de-Luxe.

Complete set, nickel-plated, ready to attach to existing brackets, with "Bowden" wire driving seat control lever.

£7 : 10!

*Vide Mr. EDGAR N. DUFFIELD
Motor Editor "THE AUTO."*

"Until one has driven—not merely ridden in, but *driven*—a car fitted with Rapson Dipping Headlamps one cannot, simply *cannot*, realise the delight of the control given, both from one's own point of view, and from those of all other road users."

TO MOTORISTS.

Safety First! Any device that takes away the full power of your headlights is more dangerous than dazzle! Switching off is suicidal! The Rapson Patent Headlamp Fittings enable you to lower your beam beneath eye level when meeting other road users, and raise it again the moment you have passed. The slightest tilt of the lamps immediately stops dazzle.

TO FACTORS, TRADERS & COACH BUILDERS.

This wonderful Rapson invention is going on every car in the country and will probably be made a compulsory fitment. We want hundreds of traders to act as our agents and where possible to fit the "Universal" Model to their own demonstration cars. A post card is all that is necessary in the first instance to secure full particulars.

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Austin

New "Austin Twenty" Quality Cars

To the range of "Austin Twenty" models have been added three "last words" in comfort and distinction—the interior drive "Grosvenor" limousine and landaulet and the four-door Ranelagh coupé. In the limousine and landaulet a glass partition can be raised between driver and passengers when desired. Luxuriously upholstered, modelled in perfect taste, these cars mark their owners as people of discrimination, while the wealth of power in the "Austin Twenty" engine and the proved soundness of the chassis ensure them swift and certain service. The new Catalogue 253 shows all "Austin Twenty" models.



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AN UNORTHODOX GEAR-CHANGE.

T H E L I C O R N E C A R .

And How "The Motor-Owner" Tester made an Exhibition of Himself.

WHEN we discovered that the Licorne car placed at our disposal for testing purposes boasted a Ballot engine, we naturally turned our caps back to front and bought a pair of goggles—this being the nearest approach to racing gear that we could contrive in the emergency. But we spoiled the impression that we might otherwise have made in Henrietta Street by boggling our gears at the outset. It had been explained to us that the reverse was straight forward and "first" straight back, with neutral between; that "second" was to the right and back, and "top" to the right and back again, but that was all we knew about it—about as much as the reader has gathered from these few words, in fact.

When we examined the gate, or quadrant, or whatever it is, in daylight, everything was as simple as walking downstairs. To get from first to second speed, you step to the right and down, and repeat the process to get into top.

It was a pity we had not grasped this in all its simplicity, for Henrietta Street always flocks to the windows when a strange car appears at No. 10. We usually put in a pretty bit of reversing or something of that kind just to please the

workers of the district, but on this occasion we failed egregiously. Luckily it was dark, but we shall have to live down that bad impression.

We will not dwell on this painful episode, but will proceed to the happy period when, with four people aboard and the driver better acquainted with the unusual gear-change, this ten horsepower car slid smoothly seawards into Sussex. She proved not to be a racer, but, what was better still, a very comfortable family car, with a maximum speed somewhere in the neighbourhood of forty, and a *penchant* for a pace of about twenty-eight, which few of the hills on the Worthing road seemed capable of reducing. It says much, indeed, for that tiny Ballot power unit, that, except in the earlier traffic of London, we changed speed once only between the metropolis and

the coast, although each seat was occupied, and the overflow of luggage had spread to the running boards.

In a way we regretted this, for we don't like being beaten, and we wanted to exhibit our new-found skill with that gear change. The engine, however, proved to have an altogether remarkable knack of holding its pace, and we hadn't the heart to "pull" it deliberately for our own selfish satisfaction.

We made Worthing in two-and-a-quarter hours, the last twenty miles being taken slowly in the dark, and on the return journey the following day we occupied a precisely similar time, on this occasion having to change a wheel. As the distance covered was roughly sixty miles, it will be admitted that this is not at all a bad performance for a little, well-laden car, especially as the pace was never forced, except on the one occasion when we endeavoured to discover her maximum speed.

After our first little misadventure, we developed quite an affection for La Licorne. She was not an easy car to drive, but she paid well for intelligent driving. We wish, though, that we hadn't heard *all* the remarks of the Covent Garden porters on the occasion of our first introduction to her.



A standard Licorne four-seater. Although the engine is tiny, it is a Ballot, and has ample power to pull a full load pleasantly.

A NEW SUSPENSION NEEDED.

By Wilfred Gordon Aston.

A possible solution to the problem of rapidly deteriorating roads ; but the solution has still to be found.

TO anyone who thinks more than superficially about motoring affairs, the growingly rapid deterioration of roads offers a formidable problem. Indeed, it becomes increasingly evident that unless something quite unforeseen happens we shall soon be following the circumference of a vicious circle. In order to cope with depreciated roads, with the long trails of humps and pot-holes that exist even to-day (they will be infinitely worse in a few years' time!) cars of all kinds have to be made stronger and heavier. Such being the case, their potentiality for doing damage to the highway is proportionately increased, and so matters tend to go from bad to worse. None of us, I think, can nowadays pretend that the bulk of road destruction is not directly and absolutely attributable to mechanical transport. It is obviously so, and from the private motorist's point of view the only thing that can be said is that the pneumatic tyred pleasure vehicle pays more in proportion for the little damage that it does than the heavy commercial lorry. There is little enough consolation, however, in this. What we have got to find, what motor-car designers have got to devise—for it is clear enough that road-construction engineers have got pretty well as far as they can—is some means whereby highways are relieved of some of the excessive load which they are now called upon to bear. It may then be possible to repair and remake them at about the same pace as they are destroyed. In this connection one may safely dismiss as quite impracticable any suggestion for increasing the amount of money that is to be spent on our road system. A further addition to an already overwhelming taxation is out of the question, and proof of this is afforded by the movement which has been set on foot in several parts of the country in favour of closing a considerable number of roads to heavy traffic altogether.

We have, then, the following methods

available for attaining the desired end of less wear and tear.

(1) To limit the chassis weights and loads of industrial chassis. This in any case is desirable and undoubtedly ought to be done. Probably in course of time it will be done, but for the present it is clear that no radical change could be effected without putting both makers and operators of mechanical transport at "sixes and sevens." It has to be borne in mind that from the economic point of view—that is to say, setting aside the effect on the road—it is better to put four tons on to a single lorry than to divide the load over two lorries, for the big vehicle will probably not cost twice as much as either of the two smaller models, upkeep expenses will be less, and a smaller personnel will be adequate for the work.

(2) To make the use of pneumatic tyres compulsory. There is little doubt that this would be productive of highly beneficial results, yet it must be admitted that the economy and general desirability of the pneumatic has not yet been as fully proved as one would like to see. Apart from that, the pneumatic is merely a secondary form of suspension: more efficient than a solid rubber tyre, but still not efficient enough for the improvement in conditions that has to be effected. It is true that it mollifies the shock which a bumping wheel is capable of delivering to the road, but the fact remains that the shock which it transmits is still very serious. We know this, or should do, well enough from the behaviour of our own cars. If, when following pneumatic tyred "heavies," we have taken the trouble to watch their behaviour, we shall have repeatedly seen the treads come out of contact with the highway surface and come down upon it again with that irresistible thump that does so much damage.

(3) By enforcing (after first devising) a better system of suspension. Possibly this idea might advantageously be coupled with the insistence upon a maximum unsprung weight. In my judgment an immense amount of good

could be done in this direction, and it is inconceivable that anything but beneficial results would be obtained.

The reason which underlies the necessity for finding a better form of springing than exists at present is that that which is common practice to-day is ludicrously inadequate. For touring-car purposes it is tolerable, but that is only because it so happens that in these vehicles the difference in weight between the car with driver only and the car with full complement of passengers is comparatively trifling. Even in a light car four passengers will not weigh more than a quarter of the total weight.

Given a constant load to deal with, the designer of an ordinary standard suspension system should have no great difficulty in producing something that should enable the wheel to follow accurately the contour of the road surface and thus obviate the bumping impacts. But the ordinary plain leaf spring, be it cantilever, grasshopper, half or three-quarter elliptic, will not answer satisfactorily when called upon to meet widely varying load conditions. If it did there would be no need for such things as shock-absorbers. On the whole, however, it does fairly well through quite a big range of different speeds.

Thus it comes about that a lorry or a bus may be quite reasonably well-sprung when it is fully loaded or crammed with passengers, as the case may be. But how different it is when the vehicle is empty. The back wheels bump and chatter terribly. In actual practice one can say from repeated observations that the rear springs of an empty three-ton lorry of the accepted type scarcely do any work at all. The vehicle is virtually unsprung, like an army wagon, and all the absorbing of shocks, such as it is, is effected by the rubber tyres—such as they are. It requires no great knowledge of mechanics to perceive that in these circumstances the amount of damage that can be done by such a vehicle travelling at speed is perfectly stupendous.

(Continued on page 28.)

"QUEEN OF SHEBA."

A WONDERFUL FILM AT THE ALBERT HALL.



Fritz Lieber as Solomon.

The large picture above illustrates the splendour of Sheba's Court, with Betty Blythe as the Queen.



Nell Craig as Princess Vashti.

Below is a scene in which Nomis, the sister of the Queen of Sheba, holds the stage.

THE POWER BEHIND THE THRONE.

Continued from page 26.)

Again, in discussing the suspension of commercial vehicles designed purely for the conveyance of goods, we must remember that the constructor naturally pays little or no attention to what in a touring car would be called comfort. So long as he can reasonably insulate his mechanical components from violent shock he is satisfied, and thereafter pays attention only to making the springs such that they will stand up against hard wear, neglect, and overload, without showing signs of unreliability. It is, therefore, only natural that most of these heavy machines are sprung on the "hard" side, and this, of course, accentuates the ill-effects which have been pointed out.

What ought to be installed on every mechanically propelled vehicle weighing upwards of one ton, and what would doubtless soon be available if sufficient inducement were offered for its production, is an automatically adjustable suspension system which would enable the springs to adapt themselves under all conditions to the load imposed upon them. The first step towards this end is the provision of a system on these lines that can be manually adjusted by the driver. A crude arrangement answering to this description, though more properly intended for regulation in accordance with the type of body fitted, has already been incorporated on some chassis. It is almost needless to add that any adjustment involves so much

trouble that no one would dream of using it for more than one original setting. Nevertheless, the germ of the idea is there, and there is no logical reason why it should not be capable of extensive development. Whilst it would render every industrial vehicle infinitely less harmful to the road surface as well as almost infinitely longer lived and less expensive in upkeep costs, it would equally appeal immediately to the car owner, seeing that it would at once save his tyres and enhance his comfort.

In short, a properly designed suspension system answering to these requirements, if brought into wide application, would be able to save this country not only millions of pounds per year but actually millions of pounds per month. To-day the national purse has to find a million pounds a week for road upkeep—a figure which is almost too high to bear thinking about.

Now, why should not the Ministry of Transport offer a prize of, say, one hundred thousand pounds to any firm which devises a proposition of this kind and demonstrates its complete road-worthiness? There would be neither difficulty nor expense involved in fully trying it out and determining the exact extent to which it lessened the impact between wheel and road. There would likewise be no difficulty in finding private firms who would take the matter up most energetically. You might object that there is no

reason why they should not do so now, certain as they would be of ultimate commercial success. My answer to that is that Six Figures are Six Figures and a big cash prize in one lump makes all the difference. Did not such rewards have an enormous influence upon the progress of aviation? And, of course, it would be a case of No Cure, No Pay!

I am in hopes that perhaps this humble article will start the brain of some genius working, and direct his energies into a channel which, successfully explored, may lead to wealth beyond the dreams of avarice.

Meanwhile, it is good to see that the calamitous rate of road deterioration has not been unnoticed by all those who design mechanical transport vehicles. Some at least have had no difficulty in seeing that the constant battle between wheel and highway, whatever its issue may be, is extremely expensive for both sides, and the policy of disarmament is therefore beginning to appeal to them. Experiments are going forward in several places upon vehicles with more than the usual four wheels, thus permitting the load to be carried by a larger area of road surface. It is probable that such experiments will be very successful, but they cannot be capable of more than a moderation of the trouble unless they also embody some improved form of suspension system, although so far as they go they are undoubtedly upon a sound principle.



His Majesty and the Power behind the Throne.

A RUSTLE IN RURITANIA.

This illuminating sketch obtained by our special artist through the ante-chamber keyhole shows the Power behind the Throne in solemn conclave with His Majesty.

What is she whispering?

Why, just this:

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THE RIGHT WAY'S THE EASIER.

Not only is it easier to put up a hood in the right way, but by attempting it in the wrong one is almost certain to damage the paint work of the car with the misplaced hood-irons. The two photographs illustrate without the need for elaborate description the right way and the wrong.



I attacked from the centre, as in the larger photograph, the hood almost erects itself.



It is seldom possible to erect the hood from the side; and note the irons scraping the body.

THE SELF-STARTER.

By Elliot Bailey.

Even pride of possession sometimes goes before a fall.

"THIS morning, Gwendoline," I remarked as I sat down to breakfast, "I shall have pleasure in giving you your first ride in our new car—the car so thoughtfully provided for us by your Uncle Thomas."

She clapped her hands.

"That will be lovely," she said. "And it's rather nice of you to speak like that about Uncle Thomas, especially as——"

She paused, but I pressed her to continue.

"Especially as?"

"Oh, well, sometimes I have thought that you were not sufficiently grateful to Uncle Thomas."

I was pained, and I showed it.

"I regret, Gwendoline," I said, "that you should consider me lacking in gratitude. Next to meanness, which you know is a thing I abhor, I consider ingratitude most deplorable. I may not have gushed over Uncle Thomas's tardy recognition of his relatives—it is not my nature to do so—but that does not mean that I do not regard his gift in its right and proper perspective."

"My word!" said Gwendoline.

"I flatter myself," I resumed, "on keeping an even temperament. I allow neither trifles nor cataclysms to shake me from the even tenor of my way. I——"

It was at this moment that Millicent, our parlour-maid, thought fit to drop the milk-jug.

I consider that any irritation I may have shown was entirely justified. If there are any things in this world that I dislike after meanness and ingratitude, they are carelessness and waste. Both of them were involved by Millicent's action. The

jug was broken, and the money expended upon the milk might just as well have been poured down the kitchen sink. Gwendoline's assertion that what I said was not fit for Millicent's ears was childish. So was her statement that in licking up the milk the poor cat was only trying to save the carpet.

I don't know why it is, but I seem to get more than my fair share of these contretemps. It is then that I am thankful that I am a man who is at once level-headed and mentally well balanced. Otherwise I might easily lose my temper.

Gwendoline's assertion that I did so in this case is false, entirely false. Pardonable irritation is *not* temper. There are many men who would kick a cat on far less provocation than I had.

In fact, beyond a word or two I made no further reference to the

affair, and on rising from the table showed that I had wiped it from my memory.

"I will now," I announced, "and get the car out."

"Well, thank goodness you've stopped nagging about the milk-jug, at any rate," said Gwendoline.

I hope she saw my displeasure. If there is one thing I cannot stand in this world after meanness, ingratitude, carelessness and waste, it is nagging, and I told her so. At least I began to tell her, and it was some time before I heard her voice from the banisters.

"Stop talking to yourself, you silly old thing, and go and get ready," she said. "I'm going to put my hat on."

I was silent. How, I ask you, can one argue with a woman like that?

It was with a feeling of pardonable pride that I noticed, on walking down

Arcadia Road towards the shed I had rented for the car, that more than one person seemed to be at the window. Anything approaching snobbery or pride is abhorrent to me, but I could not help thinking that I was the only man in that exclusive neighbourhood who could call himself a Motor-Owner—and, as such, have a monthly publication of high repute named after him. It is gratifying to consider that one is making history, even if it be in a comparatively small way.

My neighbour Tompkins even went further. He was leaning over his garden gate as I passed.

"Mornin', Banks," he observed. "Goin' to church?"

"I am not," I replied carelessly. "I intend taking my wife down to Brighton to-day in the car."



"I should have preferred to familiarise myself with certain gadgets without the prying eye of Tompkins."

A TRIFLING DEFICIENCY.

Tompkins whistled.
"I'll come and help you get her," he said.
"Thank you, Mr. Tompkins," I said stiffly, "but my wife is quite capable of getting herself out."
"Your wife! I don't mean your wife, you silly ass, I mean the car."
"Oh," I said, "had you been a trifle more explicit —"
I dislike Tompkins. I am bound to say that until the car arrived he had not been too ready to proffer his friendship. He is also addicted, as you will have observed, to a looseness of speech which I find it difficult to condone. "Silly ass," I maintain, is an epithet which should not be used by one gentleman to another. Also there were certain points about the car—gadgets, I think, was the highly technical term employed by my instructor at the School of Motoring—with which I should have preferred to familiarise myself without the prying eye of Tompkins.
Had he any delicacy he would have seen this. Instead he came with me, and two small Tompkinses came with him. As I pointed out to Tompkins, the younger was in urgent need of a pocket handkerchief.
"Thanks, old man," said Tompkins, "just lend him yours a minute, will you? I'm afraid I've left mine in the house."
That is the kind of man Tompkins is.
It was not until we got the car out on the road that I made the discovery. I walked carefully all round it, and even looked in the bonnet. There was no doubt about it, the thing was missing. Knowing Gwendoline's Uncle Thomas, I felt that I might have guessed it.
"What's the matter?" Tompkins asked. "Lost anything?"
I ignored the question.
"I am returning to the house to see if my wife is ready," I replied.
"Why not start her up at once—see if she's running all right and all that?"
"Thank you," I said, coldly. "I prefer to fetch Gwendoline."
"Oh, all right; trot along. I'll mind the car."
Gwendoline met me in the hall.

"You may," I said, bitterly, "take off those things. There will be no motoring. I might have known that Uncle Thomas's gift would be incomplete."

"Gracious! What's the matter?"

"Oh, nothing," I said, "absolutely nothing. There's no starting handle, that's all—a mere trifle not worth mentioning, of course."

Gwendoline burst out laughing.

"You silly old goose," she said, "have you never heard of a self-starter? D'you mean to say they didn't teach you that at the school?"

They had not. In fact, on the car which I had driven one had always to turn a handle with considerable vigour for a considerable time before the engine got into motion.

"Come on," said Gwendoline, "I know all about it. Uncle Thomas showed me."

"I cannot help thinking, Gwendoline," I said as we left the house, "that you might have told me before that this car was a self-starter. I am not complaining, of course, but I am bound to say that I think it was a case where the fullest information should have been vouchsafed me —"

"Oh, rats!" said Gwendoline.

I added no more. There are cases where silence is the only course consistent with dignity.

When we reached the car I found to

my annoyance that Tompkins had installed himself inside and that the engine was running. I had not believed him to be so conversant with cars. The younger Tompkins child had also apparently cleaned his face on the upholstery.

But what annoyed me more than anything else was to see that standing and talking to that fatuous Tompkins, who was sitting in *my* car as if he owned it, was—Uncle Thomas. It was typical of him, I felt, to arrive unannounced.

Gwendoline rushed at him with absurd abandon.

"You dear old thing," she cried, "to turn up like this. You are just in time to go for a ride in your lovely present instead of me."

I trust that I am always polite, always ready to sink my private feelings. The fact that Uncle Thomas has money carries no weight with me.

"My dear uncle," I said, "this visit of yours completes our happiness. I shall be charmed to drive you—charmed."

"Rot!" said Uncle Thomas. "I'm not going to do Gwen out of her ride. You can take me a few yards just to let the car show her paces, that's all."

Then he looked at me suspiciously.

"You *can* drive, I suppose?" he queried—most unnecessarily I considered.

It was Gwendoline who answered.

"He's a splendid driver, uncle. He says so himself."

Uncle Thomas grunted.

"Oh, well, I'll risk it," he said, ungraciously.

Tompkins got out of the car, and Uncle Thomas got in, but not before the youngest Tompkins had, unobserved by him, made good use of the tail of his coat.

It was a proud moment for me.

For the first time in my life, under the awestruck gaze of my neighbours, I took the wheel of my own car. Thus, as I remarked above, is history made.

That what followed did not come up to expectations, that it was in fact, nerve-racking and disastrous beyond belief, I set down entirely to the folly of Uncle Thomas.



"It was not until we got the car out on the road that I made the discovery. Knowing Uncle Thomas, I felt that I might have guessed it."

A NEW STAR HAS RISEN.

A Brief Criticism of the New Model of a Pioneer Make.

THERE are two or three automobile manufacturing firms in this country which, whether studiously or perforce, but nevertheless effectively, have avoided the blaze of publicity which the majority seem to welcome. They do not think it worth while, apparently, to create new Brooklands records, climb to the top of Mount Everest, or ascend the steps of St. Paul's. Publicity at any price is not for them. The consequence is a tendency on the part of the public to regard them as slow-going and behind the times, and maybe the opinion as to the policy of the firm somewhat tinged expectations as to the performance of the car. Without individualising further, we may mention the name of Star as typical. But the proof of the pudding is in the eating—not what you think a firm's policy may be, but what, after inquiry, you know it is; not what you think a car's performance is likely to prove, but what you find it actually to be.

With regard to policy, love of limelight for limelight's sake is not a feature of the Star programme, but their introduction of an 11.9 h.p. model which is up-to-date in every detail proves that, though they may be steady going and reliable rather than sensational in their methods, they are fully alive to modern developments and modern requirements.

So far as the car is concerned, it is just what one would expect of any Star, of any power and

any year. It is neither cheap nor expensive; neither the last word in luxury nor the first in the possession of essentials only. The new 11.9 h.p. model is just a thoroughly well-made and refined-looking vehicle, with good, sound coachwork and well-designed seating accommodation. The paint work is nicely finished and appears likely to retain its good appearance indefinitely, and leather is used throughout the upholstery. The equipment is complete, as we understand the term nowadays, and we noticed particularly that only the products of the best accessory houses are used.

But while we demand a certain minimum standard of "finish," the chassis is the main thing, and here at least the Star has a surprise in store for those who know only early examples of the make. The engine is lively and quite amply powerful; it

is controllable when running light, and will "rev." with the best when required. It has a good range, so that one is not for ever changing gear, and picks up well in traffic even with a full four-seater load. The steering is unusually good—there is a close-up feeling without the slightest stiffness, and although backlash may develop in course of time, full provision is made for adjustment. The clutch is of the single dry-plate variety, and seems well up to its work—it is at least light to operate and sure in action—while the brakes and springs are deserving of the highest praise. In the course of our demonstration run we had ample opportunity to test both these items, and found them unmistakably above the average for a car of the type.

Altogether, the Star company is to be congratulated upon their latest introduction to the market. There are plenty of 11.9's for the prospective purchaser to choose from, but he will not have done himself and his investment justice unless he makes a point of investigating the claims of the new Star. A particular point to be noted is that although the chassis is of moderate power, it is capable of accommodating all types of bodywork. We admired most particularly, perhaps, the "all-weather" car, which is a carriage specially designed for its purpose, and not a mere adaptation of the ordinary touring body and hood to meet modern demands, as is so often the case.



The 11.9 h.p. Star outside Hampton Court Palace. The lines of the car lead one to imagine that it is a more powerful vehicle than is actually the case.

THE ANGUS-SANDERSON ROMANCE.

*With an Account of the Fine New Works at Hendon
and the Performance of One of these Cars on our Staff.*

WHO can tell the dividing line between business and romance? Who can say precisely where the one ends and the other begins? Every now and then we read of some romance of industry—how some lucky person has amassed a huge fortune from selling tins of boot polish after starting life as a bootblack. But is this really the romance of business? Hardly so, we think, when you come to appraise the word "romance" at its real meaning. On the other hand, there is a real romance of industry behind the subject of our article—the Angus-Sanderson car. At the present time, when one can saunter through the splendid works at Hendon, note their magnitude and efficiency, and see the workers busily engaged in car production, it is difficult to cast back the mind to the days when the evolution of this famous car represented (probably) the most remarkable romance of the automobile world. Yet in that history that romance was certainly there, and as it is an inherent part of the story of the Angus-Sanderson car we may usefully recall some of the salient facts of the case.

REAL ROMANCE.

In the early post-war days, then, you may recall how the automobile world was suddenly aroused to enthusiasm by the announcement of the Angus-Sanderson proposition. Previously it had taken many years for an admittedly good car to earn a place of prime importance amongst the kindred products of its land of origin. To acquire an international repute in overseas

markets was a distinction enjoyed by but an exclusive few. Yet the Angus-Sanderson car swept its fame in meteoric fashion to the uttermost ends of the civilised world in fewer months than any other car had done in years. There was some magnetic force behind the scheme which seemed to attract everyone. So far as Britain was concerned there were many new elements in the manufacturing programme which struck not merely a note of novelty, but appealed as sound common sense. The whole idea was acclaimed by the Press, the experts, the retail trade and the public. Aided

in this vein of enthusiasm by the then existing boom, British orders were placed in thousands and thousands—and came in hundreds and hundreds from all parts of the world.

Here, then, was a car which had taken the mind of the motoring public in a most remarkable manner. With shoals of orders by every post and agents clamouring aloud for a fair, or a bit more than a fair, proportion of the available deliveries, the situation became one of extreme difficulty. It was, in fact, this superabundance of success that finally proved the cause of trouble. You may remember how, in an effort to get an output more corresponding to the demand, the huge national war factory at Birtley was taken over. If you have had the sad misfortune to have any dealings with a Government department you may be able to picture in a small way all the troubles and delays, and delays and troubles, which then commenced. We happened to visit the works once or twice in that period and know something of the happenings—but R.I.P. to that.

TRUE LOVE NEVER—?

But it is said that "True love never runs smooth," and for our part we think the same vein of idiomatic thought is truly applicable to many other "spheres of operation." For instance in our own particular line—the automobile world. Can you call to mind any car of prime repute in its class which had not a dark and difficult period in its previous history? If you fancy you can name such a car, put your thought



*The entrance to the offices of the fine new factory
acquired by Angus-Sanderson at Hendon.*

THE CONFIDENCE OF AGENTS

into a postal message and we will refresh your memory as to the incident or incidents. It is abnormal to achieve supremacy in the face of keen competition without a hard fight.

And so it proved with the Angus-Sanderson car. Now that all is well again, and the car has assumed once more a position of prime esteem in the judgment of the trade and the public, one does not belittle it by throwing back a mental picture to the time of calamity. You will remember how from the pinnacle of glory it suddenly fell—engulfed in the maelstrom of financial difficulty that was then all too common throughout the world. But a fall, howsoever severe, does not detract from the known qualities of the past, so long as the failure be honest. Napoleon remains a hero of achievement—despite St. Helena. But had he managed to extricate himself from the failure, and risen again to a sphere of supremacy, how much greater a hero would he be? So with the Angus-Sanderson car. Its qualities were too good to be permanently lost to the country and its trade.

SOME TESTIMONIAL.

It is at this point (we are delving into history at a length!) that we encounter a testimonial to the good

attributes of the car and the man behind it which stands unequalled in history. You will remember how tight we all were for ready money in the black days of industrial depression in 1921. You will also be able to appreciate that leading motor agents whose livelihood depends on their judgment of cars—and its equivalent, their need for thoroughly satisfying their clients, are necessarily keen judges of a car's qualities. When therefore it is pointed out that it was due to these selfsame agents that the Angus-Sanderson car was "brought back," you can gather something of the testimonial value that the action implies. In brief detail, these agents, despite the difficult financial times, subscribed some £40,000 cash towards a reconstruction scheme. But this supreme confidence was all that was necessary. In due course financial magnates came along to square things up, and the money so confidently offered by the British retail trade was returned. And now let us turn our thoughts to more recent times.

MAGNIFICENT WORKS.

We come now to the consideration of what may be termed the later development of this remarkable proposition. The works occupy a splendid site at Hendon, and are equipped with all that is latest and best in machinery.

As one wanders round the different sections of the factory it is easy to see that the building has been planned on the most up-to-date principles. The lighting is excellent, and all the shops are what may be termed comfortable. The directorate are keen believers in the principle of supplying adequate comfort for all their employees. A clerk can do more efficient work if his surroundings are comfortable and lend themselves to efficiency. It is the same with the workman, whether he be a mechanic or a body builder. This idea of helping the employees to produce the best that is in them by providing them with comfortable and efficient surroundings is a notable feature of the factory.

It should be explained that this happy side of the new surroundings is, of course, mainly a matter of good luck. It was by a happy chance that Messrs. Angus-Sanderson, Ltd., were able to "walk in" to such a splendid factory. It was in the market, and they got it—replete with all the excellent features that the former occupants had provided. The same remark applies, of course, to the offices, and when we come to the directorate's quarters it must be confessed that the term "comfort" has to be used with a pretty full meaning. But it is the same idea—suitability of surroundings to the work in hand. As

(Continued on page 35.)



"When we come to the directorate's quarters, it must be admitted that the term 'comfort' has to be used with a pretty full meaning." The entrance hall is shown on the left.

THE GREAT TRANSFORMATION



The public hansom and the private brougham have very nearly disappeared from our streets, their places being more than adequately filled by the motor-car in its town-carriage form—of which this Angus-Sanderson is an excellent example.



The Briton's love of sport has neither increased nor noticeably diminished since the period of the picture ; but his means of gratifying his taste have changed somewhat. What consternation would be caused could one but introduce this Angus-Sanderson car among the " bloods " on the Downs of an earlier day !

ON THE HUNTING FIELD



Even on the hunting field—of all places the most unlikely field of operations for an automobile—the Angus-Sanderson plays its part, for the motor-car is as much an accepted item of the tout ensemble to-day as the pack or the scarlet, and you will find this make represented at most meets.

THE MODERN AESCULAPIUS



Aesculapius, lacking the aid of the motor-car, achieved supreme distinction, but the modern G.P. would be rather puzzled to "carry on" without efficient means of transport. The Angus-Sanderson, in our experience, possesses the reliability and comfort essential to a doctor's car.

THE BEST IS CHEAPEST

Continued from page 34.

our illustration shows, however, there is an air of distinction and—shall we say (a vile word!) substantiality?—as well in regard to some of the offices and the hall. Yet it is gratifying to note that good taste is everywhere apparent, and that no inordinate luxury is permitted anywhere in the decorative scheme. It is just the happy balance of excellence, comfort, and efficiency without risking the unpalatable Sir George Midas type which one occasionally encounters. So much for that part of the question.

PRODUCTION METHODS.

Now, how much shall we tell you about the works as works? It is always difficult to know just how far the average user of a car is interested in the technical details of its production. We, who are frequently inspecting the best equipped factories in all "much of a muchness" in these days. There are, naturally, slight variations in the details of the organisation, but the basic principles of scientific motor car production are now more or less definitely agreed upon. It is but natural that, as the factory acquired by Angus-Sanderson, Ltd., is of a later period than most, the best ideas from everywhere have been incorporated.

But one can go a step further than that. The exceptional experience of engine production previously gained by the firm is also available. All the plant from the fine works that used to be employed at Southgate is now embodied in the Angus-Sanderson proposition at Hendon. We well remember watching the remarkably efficient way these engines were produced. In fact we may just take a short pen picture of a typical shop. Here you could see long serried ranks of the latest machinery. On closer inspection you find that they are all grouped in careful order. A battery of large multiple drills here has its duly appointed daily task—and no other. Somewhere else a group of expensive automatic tools is engaged on some special detail of production—and no other. Elsewhere you can see a series of lathes turning out pistons—and, once again, that is the only work they undertake. All the different parts are submitted to rigorous examination and gauge tests at different periods of the production scheme. The result of all this care and exactness in organisation is that everything is a perfect fit in its allotted place, so that the expenditure of time and money on the original organisation results in valuable savings in the end

to say nothing of the better mechanical achievements thereby rendered possible. As a matter of fact, we were assured that, given a good output, it is cheaper in the end to have the very best possible workmanship and material everywhere. It saves so much money in adjustments, fitting, and "scraping" in the later stages. With this brief indication of the efficiency and sound organisation which permeates the splendid Angus-Sanderson factories at Hendon, we may leave the question and pass on to the more important problem of the road behaviour of the car itself. All said and done, that is the item of prime importance. What the factory is like, how it is run, what it contains, and so forth, are interesting details in regard to the proposition. But what counts beyond everything else is what the product actually is, and, still more, what it does.

So far as the specification of the Angus-Sanderson is concerned, the car to-day is much the same as it was at its introduction in 1919, except, of course, for such detail improvements as extensive road experience has shown to be desirable—and it may be remarked that the original car was so good that very little alteration has proved to be necessary. The specification was as attractive then as it is now. The



"It is but natural that, as the factory acquired by Angus-Sanderson is of a later period than most, the best ideas from everywhere have been incorporated."

THE ESSENCE OF RELIABILITY

engine is of that happy medium type which is economical while having ample capacity for "family" purposes, and although the car was admittedly designed to sell at a reasonable price, and not planned "regardless," one finds many points that are not usually given a place in the make-up of an inexpensive vehicle. The pistons, for instance, are of the aluminium Ricardo slipper-type, while the crankshaft is counterweighted to secure perfect balance, and is carried in the upper half of the crank-case on three generous white metal bearings. The casting of the cylinder block and the main portion of the base chamber as one unit lends a slightly American appearance to the engine, but makes for cleanliness: while the use of a combined inlet and exhaust manifold provides the "hot spot" which is a feature of up-to-date design.

The engine, clutch and gearbox are bolted up and three-point suspended as one unit, with central gear and brake control. The propeller shaft is enclosed, and the universal joint immediately behind the gear-box is automatically lubricated by the same oil as that which serves the gears. The back axle is bevel driven, and is so arranged that the driving shafts, differential and crown wheel all may be removed without even jacking up the wheels.

Full cantilever rear springs are fitted, the torque being taken by the propeller shaft casing, while both brakes take effect upon drums on the rear wheels. The steering gear is notable. A worm and worm wheel system has been adopted, and provision is made for meshing the two components in four different positions, thus quadrupling the life of the gear, and providing a comparatively ready means of obviating undue backlash.

The equipment of the car was—and is—complete in every sense, and the car, in the matter of lines and finish, is undoubtedly a most attractive vehicle.

A REMARKABLE CAR.

In connection with its performance, we are in a very happy position to speak, and, if we may say so, to speak authoritatively. You see, we have an Angus-Sanderson amongst our staff cars. At the time of writing it has done 23,684 miles, which distance has been covered in about 21 months. If you are keen at arithmetic you will observe that the average is a little over 1,000 miles a month—pretty hard work, year in and year out, and in good, bad, and indifferent weather. To our shame we must confess that the car does not receive all the attention it deserves. It is always easier to preach than to practise! Yet, despite the fact that it is essentially a business or utility car, the repair bill in that distance is only £4 15s.—a very instructive figure. It is also an interesting figure. Three pounds and five shillings went on repairing a short circuited battery, to a large extent an accident, as it was the result of fitting some dashboard

lamps, the wires of which came into wearing warfare with a screw, the existence of which was not known. Then the engine has been decarbonised twice at a cost of 30s. per time, but, though the second "spring cleaning" of the engine was done some months ago, the firm concerned has not yet sent in the bill—an unusual and pleasing experience in these days. But, in serious vein, the repair bill is purely nominal, and does not really concern the car itself at all.

Then take the question of reliability. Never once in that period—23,684 miles—has the car failed in any shape or form. Frankly, it has been the essence of reliability—no one could want anything better. And for comfort, reasonable economy of operation, good average touring speed, and general good behaviour it has proved a thoroughbred. The excellence of the springing calls for special mention—few cars, irrespective of price, are so good. The engine revels in good hard work, and is still in excellent condition. And we may justifiably go out of our way to express keen admiration of some of the British accessories with which the car is equipped. Not one of the original plugs has been moved or even tightened, except for the original tightening after the first 200 miles run. And the Lucas dynamo, magneto, and starter function as well to-day as when the car was new.

Taken as a whole then, you will gather that we have a remarkably high opinion of the Angus-Sanderson car. It is quite an exceptional proposition, and represents, in our opinion, as good value for money as is obtainable anywhere. But in concluding these notes on the Romance of the Angus-Sanderson proposition the best thing we can say is that we are now awaiting the delivery of one of the new models to replace the early one which has given such an unqualified good account of itself. Thus are Romance and Business allied.



Angus-Sanderson chassis approaching completion. System in the actual assembly is the secret of success.

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WHO IS QUITE SANE, ANYWAY?

THE FOURTH DIMENSIONAL CAR.

By Robert W. Beare.

The Strange Story of a Hitherto Unrelated and Almost Incredible Incident.

"It seems to me," said Guthrie, "that we have reached the limits of possibility in the development of the motor-car. With all due deference to the Designer here, who always looks as if he has something up his sleeve, I contend that future progress is a matter of degree only, and small degree at that."

The group was seated round the roaring fire in the comfortable lounge of a popular hostelry not so far from the reputed centre of England, and not so far either from the centre of the automobile industry, with which all of them—a half-dozen or so—were more or less intimately connected. Being old-timers and enthusiasts, the frost-bound roads and leaden skies had not daunted them: a Saturday afternoon spin was a necessity, whatever the weather. The Designer had been trying out his latest chassis; Guthrie had arrived per motor-cycle—there was, in fact, a remarkably miscellaneous collection of power-driven vehicles outside the hotel, including a tiller-steered, tonneau-backed, air-cooled Antique of the 1900 vintage.

The owner of the latter was preparing to support his bosom pal, the Designer—notoriously a modest individual except where The Make was concerned—but there was no necessity.

"Look here, Guthrie," the Designer remarked with feeling, "I don't know whether you are being deliberately flippant, or whether you are really such a fool as you sound. I'll tell you this—on my drawing-board are the nearly completed plans of an engine entirely different from anything that has been since history began. Something better than anything that ever exists: something that, if I gave the secret to the world, would revolutionise automobile design.

"Are you serious?"
"Absolutely."
"What is the secret, then?"
"Well, you don't really expect me to tell you that, do you? As a matter of fact, though, I have discovered the nature of the fourth dimension."

"You've—what? Do I hear aright, or are wisions about?"

"If you conducted your matutinal ablutions with normal meticulousness, you should have heard. I said I had solved the problem of the fourth dimension. I know what it is. I use it. It is, or will be, embodied in my new car."

"Oh! . . . I know the ejaculation is inadequate, so I will add, 'Really'!"
"You are pulling our legs," remarked the owner of the Antique.

"No, I'm not. You can see the drawings if you like—but you won't understand 'em. Better wait; in about a month or six weeks the first chassis will be finished, and I will give you a practical demonstration."

The Designer rose and quietly left the room. A few minutes later his car was heard purring away towards Covwick.

* * *
"He's usually such a quiet old stick," quoth Guthrie, to the room in general. "I wonder if he means it?"

"I don't quite understand what the fourth dimension is," said a member of the party who had not previously spoken, "but I know enough of the Designer to feel sure that he has got something good."

"Exactly what I feel about it," the Antique owner agreed. "But what is the fourth dimension? What are the other three, anyway?"

"Length, breadth and thickness," Guthrie informed him. "Nobody knows what the other dimension is, or if there is one. And how anyone can solve a problem when they don't know what it is, or even if there is a problem to solve, beats me."

"It would. You *are* rather earthy, aren't you?"

"Well, I set some store by common sense. It's a more marketable commodity than psycho-analysis and all that sort of guff. And, look here, you chaps, I haven't said anything about it before, but do you think the Designer has been quite—what shall I say?—well, quite the same since he had that accident last autumn?"

"You surely don't think his brain is affected, do you? Although, come to think of it, he has been even quieter than usual since he came out of hospital."

"Yes; he used to be a bit irritable," said Guthrie. "Now it's impossible to rile him—in fact, Fred, he's developed a sort of sarcastic humour. That's why I can't help wondering if he is setting up a super-rag for my especial benefit."

"I don't think he would go to that length," replied Fred. "The only thing I have noticed which is at all abnormal is that immediately he got back to the works he set to and re-designed the chassis from stem to stern, and if you compare the latest model—the one he was driving—with the 1921 car, you will be amazed at the improvements. Nothing big, you know, but every detail seems to be perfected."

"Perhaps the enforced rest did him good—stimulated his brain," said the Silent One.

"Perhaps," Guthrie agreed; "but I can't help feeling that his brain is more than stimulated—I believe it's disturbed, speeded-up, or something, like a clock without its check gear or whatever they call it."

* * *
Six weeks elapsed before any of the party heard of or from the Designer—a period which saw the passing of the Antique in an unequal conflict with a steam tractor. Frederick, the owner, regretted its loss, but congratulated himself on a fortunate escape from injury and on the receipt from a beneficent insurance company of a sum much in excess of anything he could have hoped to obtain in the second-hand market. He had invested the spoils in a motor-bike, and, with Guthrie, was about to set off from the latter's office for the usual Saturday spin when the telephone bell rang.

"Hello! Is that Guthrie?"

"Yes; that the Designer?"

"Speaking. Have you anything on this afternoon?"

A TRIFLING ERROR.

"Gum boots and a sun helmet only. Why?"

"Because I want you and Fred to meet me at the Wareentry Arms in, say, an hour—three o'clock—to give you that practical demonstration we were talking about six weeks ago."

"Right ho! I'm very curious—we both are; but we half believe you are ragging us?"

"You'll know for certain at three o'clock. By-by!"

After a quiet run they reached their destination, nearly half an hour ahead of time, and there was, of course, no Designer.

"He'll be here on the stroke—not a moment before and not a moment after," said Fred. "Punctuality's a fetish with him."

"Well, come and have one while we're waiting."

Two minutes before the hour they were at the rendezvous, awaiting the arrival of the wonder-car—if such it proved to be, and as the neighbouring clocks began to strike a long, rakish chassis, with the Designer, mounted upon a sugar box, at the wheel, appeared at the kerb.

Guthrie and Fred had been chatting in the porch; they had missed his arrival, but merely thought that their attention had been elsewhere for an instant.

"Hello! On the stroke, as usual! Well, whatever else the car may be, it certainly is silent. We didn't hear you come," said Guthrie.

"Nor see me, I think?" the Designer asked, with a somewhat sardonic chuckle. "Ah, well, boys! wait a bit—you're going to be astonished. You've had your drinks, I suppose? Right! Get on your machines, and go down to the old avenue. When you get to the beginning of the straight stop and synchronise your watches—I know you each have a split-seconds arrangement. Then, one of you set your speedometer at zero, go exactly half a mile down the road, and be ready to clock me."

The two motor-cyclists set off side by side; and the Designer, giving them a few minutes' start, followed. The chassis ran with the barest perceptible sound, little more than the whispering of the tyres on the road. But the driver was in no hurry; he kept his distance, so that on pulling up beside Guthrie, he saw that Fred had already taken up his position half a mile ahead, and soon was waving to signify his preparedness.

"Are you ready, Guthrie? Because

I am going to show you such a speed test as the world has never dreamt of!"

"Yes, I'm ready. Standing start?"

"Sure—you won't know the difference!"

"Right then!—One, two, three—GO!"

The car was gone, without a sound. Guthrie blinked, glanced at his watch, looked down the road—and was amazed to see the Designer already pulled up beside Fred! He could scarcely believe his eyes—the absence of the usual roaring of acceleration and general fuss of a speed test bewildered him.

He heaved a sigh. Words failed him. Limply he bestrode his machine, ran down to his brother timekeeper, and looked a query.

"Three and three-fifths!" said Fred without comment.

"What?" queried Guthrie.

"Seconds!"

"Impossible!"

"No," remarked the Designer quietly. "Not impossible. Nothing is impossible. But you are not very expert at 'clocking,' Fred; you made a considerable error then."

"I should just think he did!" ejaculated Guthrie, whose faculty of speech was returning.

The Designer smiled. "You'll think some more before the afternoon's over," he remarked. "Never mind, boys, try again. Get your



"Nothing is impossible," the Designer remarked quietly. "But you are not very expert at 'clocking.' You made a considerable error then."

watches right; and you, Guthrie, go back to your old place. I'll do the speed test the other way."

Guthrie set off in the determination that he wouldn't be caught napping. He stopped, turned, let down the rest, and waved. He saw Fred prepare for the start, and held his watch ready. He almost heard the words:—

"One, two, three—GO!"

And then the car was standing beside him!

Hurriedly snapping his watch, he gasped, looked from the Designer, sitting placidly at the wheel, to Fred, who had mounted his machine and was hurrying to join them, and then collapsed on the bank.

"Well," he ejaculated, "this beats me! You got here almost before you started!"

"Not quite that, perhaps," said the Designer; "but a little too soon for you, apparently! Well, boys"—as Fred drew up alongside—"what was my time then?"

They consulted their watches.

"Two and four-fifths," said Guthrie. "But hang it all, man, this is absurd! What's the matter with us both?"

"Still a small error," the Designer said. "Try once more—perhaps you'll get it right the third time."

"Six hundred-odd miles an hour!" Guthrie muttered, as he took up his old position and Fred set off down the road again, after they had re-set their watches. "Has he magnetised our clocks' or something? Turn 'em round," he added to the Designer; but the car had already been turned.

"How the dence did you get there?" he asked. "I scarcely turned my back for a second, and never heard a sound!"

"I'll explain after this test," the Designer replied. "It's a shame to bewilder you chaps any longer. No—are you ready?"

"Yes. One, two, three, GO! And be damned to you!"—the last sotto voce.

This time Guthrie heard the familiar roar of the exhaust, saw the stones fly from the wheels, watched the car gather speed and pull up far past the second timekeeper. He saw the Designer reverse, turn the car round, and come slowly back towards them. Not until then did he proceed down the road to learn the result.

On comparing watches they found that the half-mile had been covered in exactly 20 seconds.

"That's a bit more like it," remarked Guthrie. "Still, go from a

(Continued on page 43)



SOLOMON IN ALL HIS GLORY WAS NOT ARRAYED LIKE ONE OF THESE

"These," of course, are any of the recent issues of "The Motor-Owner"—the gaily decked magazine with the twentieth century atmosphere. The beauty of its colour pages, the novelty of its travel supplements and the interest of the editorial matter certainly would have strongly recommended it to Solomon, whom we should have numbered among our subscribers had he lived to-day. Solomon was a man of judgment.

And talking of men of judgment, what do you think of "The Motor-Owner"? If you are of the large majority, who think it worth many times its price, will you do us a little service? Will you show your copy to your friends? We want your friends to be our friends—we have confidence that the magazine can do the rest.

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THERE IS NO TIME LIKE THE PRESENT

JUST WHAT WE EXPECTED.

(Continued from page 42.)

standing start is pretty hot. What's the power?"

"You would call it 15.9, I suppose," said the Designer. The bore is 80 mm. Look here, I'll tell you all about it—I am sorry if I have startled you, but I warned you to be prepared for something extraordinary, didn't I?"

"You did," replied Fred, "but we both had an idea that you wanted to put one over on Guthrie for his scepticism."

"So I did. But I told you the literal truth—I have discovered the meaning of the fourth dimension, and have applied the discovery in this car. In the last test it ran simply as an ordinary, everyday three-dimensional car, but in the first two tests, when you made such a hash of the timing, it was running in the fourth dimension."

"I see," said Guthrie, ever loath to admit ignorance, and yet completely at sea. But what do you mean about 'a hash'?"

"Well, weren't you three and three-fifths out the first time, and two and four-fifths the second?"

"But those were the times you took."

"Pardon me, they were the times *you* took!"

"You cannot mean that you covered the half-mile in no time at all?"

"That is just what I *do* mean. In the fourth dimension time is not. I was at the end of the speed test at the same time that I left the beginning."

"This is going to give me a headache," remarked Fred. "So far as I can understand, being in two places at the same time means being in two places at once. Is that so?"

"Obviously," said the Designer. "Of course it's obvious, you chump," remarked Guthrie. "Haven't you just seen him do it?"

"Half a minute—if you can be in two places at once, it rather messes up one's ideas of space as well as time. Can you occupy the same space as something else at the same time?"

"Certainly, since you persist in using the words 'time' and 'space.' They are terms that have no meaning in the fourth dimension—mere gibberish!"

"Well, what I am getting at is this, although I'm afraid it's rather a *reductio ad absurdum*. The one and only cause of an accident is that a car endeavours to occupy space already occupied by something or somebody else. As I see it, *you* could do this

without damaging either your car or the other object?"

"Ye—s, I suppose that's a reasonable deduction. Yes, of course, it must be so."

"Well," said Guthrie, pulling himself together and endeavouring to show a little intelligence, "if it is so, there's nothing to prevent you from running the car through that stone wall further down the avenue. Do that, Mr. Designer, and I'll admit that the practical demonstration is a success."

"I will; come along."

They all three proceeded to the wall in question, which bordered the road without the interposition of a ditch, and the Designer ran his car across the road with the bonnet nearly touching the wall.

"I almost wish you wouldn't do it," said Fred. "It's against all reason, and I have a nasty feeling that something will go wrong. Go dead slow, at any rate."

"Don't forget to switch on the 'fluence," Guthrie warned the driver. "How do you do it?"

"Just pull this lever hard over." He pointed to a short metal projection apparently working in a slot in the floor boards. "They know all about the rest of the car at the works, but I made every bit of the dimensional control box with my own hands, and the drawings are in the dashboard locker. Here goes!"



They saw the car's nose approach, touch—and pass through the wall without visible damage. The artist knocked the wall down, not the car.

The Designer slipped into "first" with the engine merely ticking over, let in the clutch very gently, and the car crept forward.

They saw its nose approach, touch—and pass through the wall with no visible damage! Gradually more and more of the car vanished through the solid wall. There was a sharp click, the engine roared, the car shot forward, and instantly every vestige, down to the tail lamp, disappeared. The jerk had thrown the Designer backward off his sugar box. His form, lying prone and unconscious, was the only evidence that the whole affair had really taken place. His friends dropped their machines and rushed to his aid, but even as they reached him he struggled to his feet, both hands pressed to his temples.

"What's happened?" he asked. "What am I doing here? Has there been an accident?"

They explained.

"I don't seem to remember much about it," he said. "I *do* remember setting out from the works on the new chassis with the intention of startling you chaps with some new improvement. But I can't recall the slightest detail of the improvement itself. Let's see what has happened to the car."

They climbed the wall, but there was no sign of the chassis—no sign of any disturbance. They looked at each other in amazement.

"If what you have been telling me about this afternoon is not all bunkum, I should imagine that the throttle control came adrift, in which case the car will keep on tearing round the countryside until—well, until time and space have ceased to be."

"It looks as though the Fourth Dimensional car has ceased to be on the three dimensional plane, at any rate," said Guthrie. "And the worst of it is the drawings have gone with it."

"Never mind, boys, I feel tons better," the Designer said cheerily. "It seems as though a governor has started to work in my brain to prevent it from racing to its own destruction."

"It was just as I said," Guthrie remarked, later on. "The previous accident jiggered up his escapement, and his brain, working at a terrific speed and performing wonderful stunts, would soon have run down. This shock shook the pawl back on to the ratchet—well, you know what I mean? I'm not even sure I'm sorry about that car. It was about a thousand years ahead of its time."

GOOD THINGS FOR THOSE WHO WANT THEM.

THE MICKLES THAT MAK' A MUCKLE.

Some Accessories which "The Motor-Owner" has tried and passed



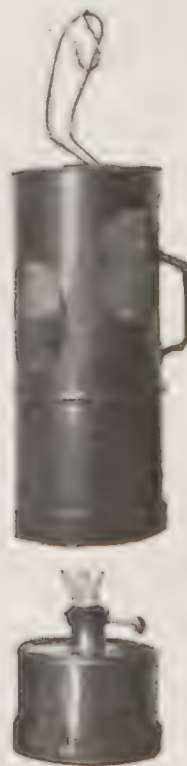
The Acc petrol filler has several novel points to recommend it, notably the fact that it is carried actually inside the spare petrol can, and is instantly available for use when wanted. This accessory is well made and is necessarily somewhat expensive, the price being 15s. with a twelve-inch or 12s. 9d. with a six-inch



flexible tube. The illustration on the left shows the filler as it would be when closed up inside the spare can, while on the right the tube has been pulled up through the collar and locked in position for use. The small spring is to prevent rattle. The makers are Murdoch and Robertson, 12, Mortimer Street.



It doesn't matter whether a car is designed as a two or a four seater—every owner at some time wants to carry more passengers than the proper complement. The difficulty is how to accommodate them, but Brown Brothers, of Great Eastern Street, E.C.2, have solved the problem with the "Klip Seat" illustrated. The seat is rigid when in use, and folds up into small space or disposal when not required. The price is 43s. 6d



The Everwarm radiator lamp, sold by Edwin Chambers, Ltd., of Bradford, justifies its low cost of 17s. 6d. in a variety of ways. It prevents damage by frost, saves the bother of letting out the water overnight and filling up in the morning, and secures easy starting in cold weather. It is made somewhat on the principle of a miner's lamp, and is quite safe to be hung conveniently inside the bonnet

The "Kartott" adapter, made by W. J. Fough and Partners, Ltd., of 32, Shaftesbury Avenue, has two baffle plates at opposite sides of its bore, and is designed to prevent the plug from oiling up. We tried a set on an engine which was a particularly bad offender in this respect with complete success. The price is 4s. each, and presumably any necessary thread can be obtained to suit engine and plug.



A particularly ingenious "spot light" which is ornamental as well as useful. It is the "Universal" lamp of the Streatham Engineering Co., 47, Streatham Hill, selling at £2 10s. The beam may be turned in any direction and has a good range. This lamp is a great improvement, so far as appearances are concerned, upon some of the cumbrous appliances on the market

MY LOG BOOK.

By *Hermes.*

Activities of the R.A.C. and A.A. This year's Tourist Trophy Race. A Justice's view of the Motor Registration Book. Interesting performances and accessories. A glimpse of the Scottish Motor Show, and a further list of price reductions.

IT brings back the pleasant flavour of old times to see that the R.A.C. is not only organising once again the famous T.T. motor race, but that already a considerable number of cars have been entered for this event. There are regrettable omissions, as is to be expected at a date when the world has been fashioned on lines that, if in some sense new, are in a more definite sense unpalatable.

Contrast the decade just before the war, and you will see what I mean. If you are versed in motor lore you will recollect the prowess of the Rover, of the Humber, of many more cars on the Isle of Man; the pity of it is that, so far as I know at any rate, they will not participate this year.

But, of course, it is early days yet, for the T.T. race does not take place till June, and long before then it may well be that the entries will be considerably augmented. As it is, the trade has, I consider, shown a very sporting spirit, for at least twenty-four cars had been enrolled at the time I wrote these notes.

The Isle of Man race this year is a dual event, for in addition to the T.T. event itself the R.A.C. is holding another, termed the "Fifteen Hundred" Trophy Car Race, which, like the other, is international. For the T.T. the entries comprise three each of the Sunbeam, the Vauxhall and the Bentley. In the "Fifteen Hundred" event four firms—the Sunbeam, Aston-Martin, Crossley-Bugatti, and Talbot-Darracq—are each running three cars, while the A.C., the Alvis and the Hillman have entered one apiece. And as the last does not close until March 31st, the chances are that still other cars will participate.

Dazzle is becoming anathema at coroners' courts and elsewhere, and I hear rumours that motorists may even be held responsible for accidents occurring through lamps that blind other road users. Our motoring authorities and our headlight manufacturers alike are perfectly well aware of this danger and have con-

ducted numerous experiments in the hope of curing the trouble. The A.A., for example, ever practical, has worked very hard on the problem, in co-operation with Lieut.-Col. Chas. Jarrott, O.B.E., the A.A. vice-chairman and representative on the Ministry of Transport's Lights on Vehicles Committee. Nothing definite as to regulations governing the nature of headlights has as yet transpired, but motoring interests are being carefully safeguarded.

Conditions in Ireland warranting the hope of continued motoring there this year, the A.A. is hard at work inspecting and classifying Irish hotels and repairers, and has already erected something like a thousand danger and direction signs of its own, as well as having established offices at 23, Suffolk Street, Dublin, and 45, Arthur Street, Belfast, and 5, Wellington Place, Belfast.

As the number of lady readers of THE MOTOR-OWNER is increasing, I imagine it will not be amiss to draw attention to the very attractive display that one sees at Woollands'. That there were delightful bargains at the sale that closed there last week goes without saying, but what is more to the point is that this firm maintains throughout the year an exquisite selection of costumes, millinery, furs, and so on. Some of the dance frocks are extraordinarily inexpensive, while sports and motor wraps are exceptionally stylish.

"Vexatious and a hindrance to the motor user and to the motor trade . . . unsound in principle and unworkable in practice," is how Mr. Justice McCardie recently delivered himself respecting the Motor Registration Book, which certain optimists fondly imagined would make it impossible for cars to be stolen. Perhaps, therefore, we may hope for its discontinuance, and the Motor Legislation Committee is bestirring itself vigorously to secure that end.

Certain of my readers having desired to know who handles the light

'Twelve" Palladium, I would point out that Messrs. Ernest Grimaldi, of 87, Great Portland Street, W.1, are not only the authorised London agents, but also hold the sole distributing rights for the counties of Durham and Northumberland, where one of the partners is launching out on a particularly acceptable programme. In the London showrooms I noticed a very attractive selection of two- and four-seated Palladiums, both of the standard and the de luxe types, as well as various interesting all-weather models.

Despite the very general use of electric lighting there are many motorists who fail to get the best from these equipments. In the case of the 8-h.p. Rover, for example, drivers have been using both the bright and the dim filaments together, a plan that the Rover Co. state to be unwise. In fact, this lighting set was never intended to be used in this fashion, and such a practice will damage the batteries and possibly the filaments. On the 8-h.p. Rover one lighting switch only should be used at a time; bright lights should never be switched on unless charging up; the batteries should be recharged as often as possible, and the charging switch should be withdrawn immediately the engine is stopped.

1,549 miles in 10 days, a recent performance by a 1922 15-h.p. Waverley, proved thoroughly satisfactory. For the route was London-Bristol-Cardiff, thence through hilly Welsh country to Chester, Carlisle, Perth and Aberdeen and back to London. Moreover, the car carried three persons and ample baggage, and was driven by a private owner, Mr. Penno. Petrol averaged 27 m.p.g., oil 1,128 m.p.g., and neither car nor tyres gave trouble.

To prevent luggage from being stolen or shaken off the back of a car, J. B. Brooks & Co., Great Charles Street, Birmingham, have devised the Instantus holder, made entirely of metal and, as it incorporates a lock of strong and uncommon pattern, by

(Continued on page 48.)

"THERE ARE MORE WAYS OF KILLING A CAT——!"

GIRTH CONTROL.



1. Just as the newspapers were full of anti-fat campaigns and so on, the Fairlamb's made the harrowing discovery that they and their spats were no longer on meeting terms. With cold weather coming on, obviously something must be done about it. After serious deliberation they decided to join the girth control movement, and purchased a complete set of instructions for home calisthenics.



2. The instructions, however, were inadequate. Mr. Fairlamb lay on his back and raised himself twelve times by the nape of the neck, but was then unable to find any directions for getting on his feet again. Fortunately, the commissioner had a rope and pulley handy, but the Fairlamb's felt that it would be something of an imposition to go on with the calisthenics, and so they decided to go in for walking instead.



3. Knowing each other's distaste for that pastime they agreed to carry pedometers—just so there wouldn't be any cheating. At the end of two weeks, Mr. Fairlamb's record suddenly leaped to 89. He had been making his office boy wear it. To-day the boy, in waggish mood, had jiggled it up and down to the astounding total. Mr. F.'s domestic position would have been far more critical if at that moment the poodle had not capered in with his mistress's pedometer still hanging about its neck.



4. The Fairlamb's then decided that the most sensible thing to do would be to diet. This time they would really see the thing through, and Mr. F. was actually jovial over his modest dinner of oyster broth with two slices of rusk (no butter). He would usually start for the office right after dinner to clear up some work, and Mrs. F. usually found some meeting to take her out. The dénouement occurred at a nearby restaurant on the twenty-third day.



5. It was in this crisis of their affairs that Mr. Fairlamb had his brilliant idea. After all, he observed to Mrs. F., they had no objection to being fat; the only thing they minded was not being able to get their spats on in cold weather. He is really a rather clever man in his way, as his wife is fond of saying, and with a pencil and paper he had the whole thing figured out in ten minutes, working plans and all. The Fairlamb's are happy once more.

AT THE SCOTTISH SHOW.

(Continued from page 46.)

the way—it is a matter of a moment to secure or detach a trunk.

In both South Africa and Australia the Vauxhall has gained honours in recent competitions. In a speed trial at Pretoria, for instance, a 30-98 h.p. model gained first place at a speed only a fraction short of 80 m.p.h. in one direction, and rather more than 81 m.p.h. in the other. A similar Vauxhall covered 1,320 yards of steep hill during races organised by the R.A.C. of Australia, in 69½ secs.

Amongst particularly interesting items at the Scottish Motor Show that closed on the 4th inst. were the 1922 Smith speedometers, which are suitable for driving off the cardan shaft or a front wheel, and the firm's new 8-day clock at the specially low price of £2 17s. 6d. Dimming switches, the Euk easy starter, and the Smith electric starting and lighting systems also attracted much attention.

Humbers made a fine display at Glasgow with their motor cycles and cars. In the latter group were eight or nine of the 11.4 model, with a variety of the stylish coachwork of

which this firm makes so welcome a feature. Other Humber models comprised several of 15.9 h.p., which between them covered every class of carriage, and were marked by skill and artistic finish of the highest order.

Tourists in France, whose numbers are becoming greater every year, will welcome the English-French dictionary from the pen of Mr. Leonard Henslowe. Published by Constable and Co., 4s. 6d. net, the book contains an exhaustive list of motor technical terms, important phrases, and a lengthy table of English measurements and their French equivalents.

Merit will tell, they say, and it has in the case of Messrs. Stratton-Instone, 27, Pall Mall, S.W.1, special agents for Daimlers and the B.S.A. productions, for they have just been honoured with a Warrant of Appointment to H.M. The King.

That trade booklets need not be unattractive is proved by the brochure just issued by the Ashton-Evan people, of Birmingham. It is exceptionally well produced in colour on art paper, appropriately illustrated, and offers

you useful information in palatable form. There is not too much, but just enough to interest and to instruct.

The S.F. model A.C. has proved so popular that its makers are inundated with suggestions that the car's price should be still further reduced. This widespread desire to become an A.C. owner is greatly appreciated by the firm, and Mr. S. F. Edge, who has agreed to reduce the price of £550 by £55, provided the purchaser is willing to forgo leather upholstery, double windscreen, all-weather hood and its envelope, the 1922 running boards and the self-starter motor.

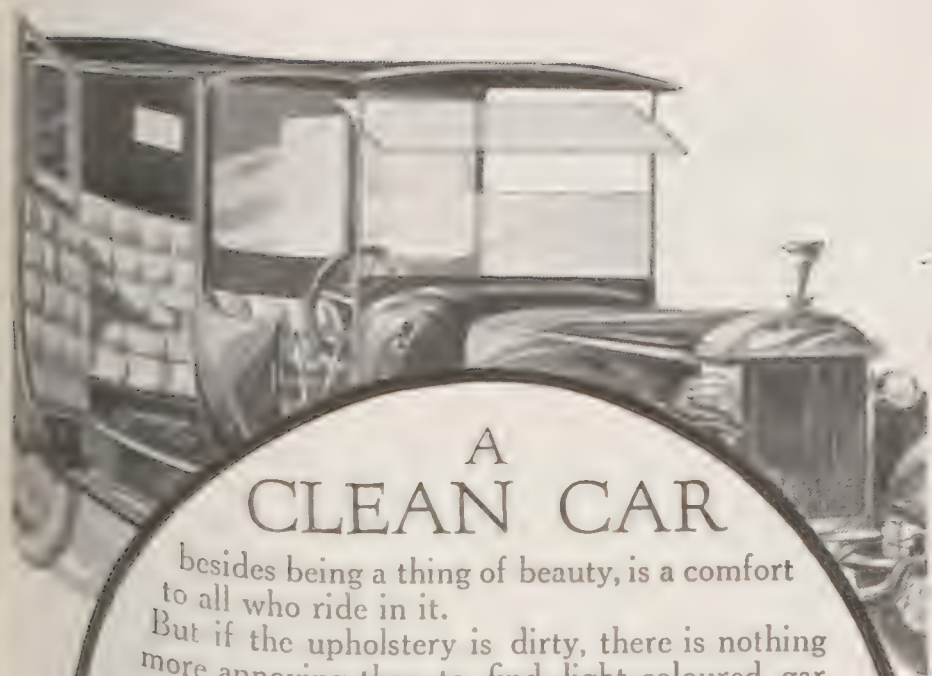
Prices are still falling in certain cases, the 12-40 h.p. D.F.P. chassis, for instance, being now listed at £550, with suitable reductions for its various body styles. The Deemster service model has likewise been reduced from £425, its cost, complete, being now £375. Both the Essex and the Hudson Super Six are more inexpensive, the former costing £425 as a chassis, and £490 as a five-seated tourer, while the Hudson chassis is listed at £595, the four-seated tourer at £705.



The inimitable Max Beerbohm has accused "G.B.S." of constantly standing on his head—metaphorically speaking, of course—but here is substantial evidence that Mr. George Bernard Shaw occasionally adopts a normal position. He is sitting quite naturally in his A.C. in this picture at any rate.

* Illustrating M.B.'s conception of G.B.S.





A CLEAN CAR

besides being a thing of beauty, is a comfort to all who ride in it. But if the upholstery is dirty, there is nothing more annoying than to find light-coloured garments being soiled by coming into contact with it. Sooner or later the inside upholstery of cars—particularly of open cars—becomes soiled and grubby.

It is then high time to send your car to EASTMAN'S, who will treat the entire inside by their wonderful DRY process, and return the car beautifully cleaned in 2-3 days.

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The present may therefore appear a peculiarly uncertain and unpromising time to start farming in the Union of South Africa. But it is not. The beginner in farming will be interested in markets only some time hence. He has to train. Then, when he has acquired land, he must work a while before he will have produce to sell. There is a reasonable prospect that by that time markets may be better.

Meanwhile, unlike the business man whose stock lies idle, or some established farmers who must accept low prices or wait, the beginner in farming has not to "mark time." From the moment he acquires land he can profitably employ his capital and himself. There will be fields to work, maybe springs to tap for irrigation; fences, buildings and dams to make or improve, trees and crops to grow. And livestock will be multiplying by natural increase, the more profitably as at present the foundation stock for flocks and herds can be bought comparatively cheaply.

There is much in favour of starting now. Not less than £2,000 capital is required.

Fuller particulars may be obtained from the Office of the High Commissioner for the Union of South Africa, Trafalgar Square, London, W.C.2.

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MAKING A PAIN OF PLEASURE.

ANTICIPATIONS.

Are the pleasures of anticipation and the somewhat chastened joys of remembrance of more positive value than the actual experience of realisation? Put in other words, longing for what we have not and regret for what we have lost are keener emotions than mere present pleasure.

THAT we can look forward to better times is something for which to be thankful. For to most of us who are privileged to live in a land that is reputed to emulate the post-mortem destination of the Hellenic warriors, our experience is oddly unpalatable.

Even the lowly toad is said to be in quest of the ideal. And a similar fault is embosomed in the breast of man. Of course you may prefer to substitute another term than fault. Some, indeed, would call the search for the ideal a virtue.

And a virtue it is, upon occasion. But even virtues have their drawbacks. The defects of their merits. You are a motorist, of course, being a reader of *THE MOTOR-OWNER*. And being that, you are in some sense an idealist, an optimist, anyhow. Did you not have it upon the unimpeachable statement of the liquid-tongued salesman that the car you bought was like a flawless diamond? If it would, it could give no trouble. And it would fit you like a tailor-built suit.

In possession of model aristocratic your existence was to be enviable, your road a path of roses. In short, your anticipations were roseate.

The car, with all its virtues, arrived. Almost invariably that happens, as long as the critical folk at the bank raise no objection. And

Well, then you began to be undeceived; the car did not run on a "mere whiff of petrol"; nor did the tax-grabbers fail to observe your newly

acquired dignity. Not that these little things matter. There is no pleasure in having money unless we spend it, at least that is the view of our ladies, and who will say they are wrong? Besides, that which we obtain lightly is treasured in the same fashion, and therefore, by all the laws of logic, to enjoy motoring thoroughly we must pay well for it.

To those, then, to whom motoring is losing its zest, the philosopher has a ready answer. You will find it in a phrase I have used above, and therefore it needs no repetition. But why should we be disturbed thereat? Is there not a law of compensation even for us?

Most certainly there is, and it lies in simple things. You know the power of a vivid imagination. Does not the child wreath the fancies of the most enthralling sort around its everyday toys? And children of a larger growth, they also are thus blessed of the gods, and in imagination or anticipation find great source of pleasure.

Mark the power of anticipation in the motorist's life. Before the new car arrives what wonders it will perform! It is to bear you on everlasting tyres away from the prosaic and from everyday. If it does not, the fault must lie in your inability to divine the romance that awaits the elect.

And, what is more, you need not run the car a puncture-causing mileage to find diversion. Without bodily or mental fatigue, without distributing largesse to grasping host, voracious garage or fuel vendor you, if you know how, may at microscopic cost gain a wondrous pleasure.

How? By the potency of imagination, of anticipation if you will.

I recollect that, in the days when four little farthings would wing your letter from Penzance to Peebles, I was about to set out for my first continental motor tour. For weeks beforehand I studied maps and guide books, choosing a route only to vary it as some fresh feature of interest refused point blank to be ignored. In the end I had

devised a tour of mammoth proportions with half the wonders of a hemisphere to be encompassed in four weeks.

Of course it did not come off. My $3\frac{1}{2}$ h.p. motor cycle of date 1906 could do many things, but it boggled at that. True, it provided me with a variety of experiences, many delightful, more that to my now more sober mind would prove unpalatable. The main pleasure of that tour lay, in short, in anticipation.

As I pored over



An awkward corner at Pulborough that badly needs alteration. The prominent building in this picture occupies the centre of the roadway, and the ignorance of the stranger is very liable to cause an accident.

GRADING BRITISH ROADS.

my gaily coloured maps I had visualised myself doing a steady two hundred miles day after day, through beflowered country and beneath skies the most serene. I revelled in that trip—beforehand. Actually, I learnt that roads may prove unkind, that even continental skies grow dark and wrathful, that machinery does not possess recuperative powers. Also that great mileage has the dual defect of tiring the traveller and knocking sightseeing from his carefully arranged programme.

I need not dwell on my hardships. I had merely made a pain of pleasure, as youth is prone to do. To blame motoring for failing to be ideal is folly. We live, after all, in a very ordinary world—a world girded about with certain definite limitations.

It is ever the same. Even a 1922 Rolls-Royce can't do everything. Nor need it. If we were to attain the ideal we should feel at a loss, so oddly is humanity constituted. Elusiveness carries a great charm; the ideal, by the very nature of things, must remain unattainable.

It is a sad confession that I have made. Equally it is not so. For, short of the ideal, there is much to give us pleasure, while leaving us the thrill of picturing the joy of what we *might* do.

In anticipation we skim a country on pinions lighter than those of the fleetest eagle. Never are we too hot or oppressed by cold, or faced with unappetising meals. From the comfort of our smoke-wreathed arm-chairs we drop in at Cologne, quaff aromatic Asti at Lucerne, and an hour later stand before the mighty Roman splendour of San Marco.

Do not call me a romancer. At least not more so than you are, if you use a heaven-born imagination. For anticipation is rooted in fact. It is just because you know what the car has done that you can paint these mind-pictures. It is merely that you accentuate the high lights; that you

see with the eye of the artist; that you lift yourself above earth by the exercise of anticipation.

Yet do not think that I urge you to lay the car by. The scientist would tell us that even our wildest flights of fancy are based upon actual experience. You cannot mentally visualise the unknown. A sensible modicum of motoring combined with a rational mental enhancing of its pleasures forms the ideal. For thus you link together the two worlds that mean so much—everything, in fact—to our lives.

And, descending to the commonplace, do we then reach an unpalatable anti-climax? By no means. Anticipation, even here, is potent.

Despite our progress, can we not visualise much that would make motoring—practical motoring—still more delightful? Even to-day we have kindly authorities working on our behalf. You have heard, no doubt, that they are grading the roads of the British Isles? And also numbering them. When next you set out from London to Edinburgh you have only to follow the route marked A1. A1! What comfort lies behind that well-known symbol! Safety, value, certainty—all these it represents. Never need you be in doubt. The arm that will lure you off to the joys of Little Pebblecombe will bear its undoing on its own face, for it will be labelled B2, or even B1, and thus you will have it on the word of the Ministry of Transport that it is but second grade.

And this route-numbering is but one of the many coming improvements in the motorist's lot. At last we are being recognised as of value to the State. Possibly because of the extra two million pounds our revenue has yielded. Money talks—evidently! And to some purpose in our case.

Here, then, we have a fresh basis for further pleasurable anticipation. What may we not visualise in our mind's eye? Hotels that inform us before entering that they think cold mutton the best for our health? Garages where they don't charge more than 100 per cent. profit on work that is good?

And if only we could be certain how long that doubtful tyre would last, whether Jones's temper will endure that extra trunk his wife asserts is necessary to her happiness on the tour! Well, then, even before these and similar boons become fact, their mere contemplation will warm our breasts with something of the pleasures that our gifted children find in anticipation.

But anticipation, like so many things in this new-fashioned, Teutonic engineered world of ours, has to be handled with dexterity. Also with wisdom-toothed nous. For its point of view is dual.

You recollect the philosopher who set out to abolish shadow? "When the sun is ever flooding the earth with golden, desirable rays, why should man be drenched in darkness one day of Sol's revolution, and the other

be interfered with by vagrant clouds? I will dispel the shades. . . .

At first, so history as credible as much of that carefully hatched out at St. Stephen's informs us, men acclaimed our philosopher. Then, with their innate fickleness, they murmured, "Give us back our shadows. This everlasting light wearies us."

Poor anticipation! It fell short of its promise. It possessed a subtle drawback; cutting more ways than one, it disillusioned.



Mickleham Corner, though still requiring care on account of the sharpness of the turn, has been rendered materially less dangerous by widening the road.

AMAZING RELATIONS.

A LESSON IN HISTORY.

By Professor R.F.C. Crossley.

How to Make Attractive the Dry Bones of a Somewhat Solid Subject.

ON this particular occasion the class numbered five—Mary and Honor, both aged eleven; Crackjacks, aged ten; Sonia and Cuthbert, of uncertain but less mature years. One or two much older but comparatively insignificant people were also, so to speak, in the offing.

Of those that matter, Crackjacks is perhaps the most remarkable. His facial beauties are of the rugged British type. His figure is of the kind that makes one understand why the epithet "stout" was always applied to the English yeomanry. His carriage recalls the sturdiness of the Eighth Henry rather than the elegance of the Second Charles, but at the moment his taste in sartorial decoration is a neat blend of the late Stuart and the early Lord Fauntleroy periods. In the matter of clothes, however, he is changeable. He first faced the world in a red but abbreviated bathing costume. Since then he has played many parts. During one period of extreme opulence he invariably wore a white overcoat with fur collar, cuffs, and trimming over his striking football jersey and shorts.

Sonia is Parisienne and "chic." Cuthbert comes from an old family, one of the best known members of which are at present residing on the salubrious heights of Mappin Terrace, Regent's Park, where they challenge the popularity of their famous neighbour, Mr. C. Lion, the expert in aquatic sports. Cuthbert has always been rather under a cloud. His very name indicates the cause of the trouble. He is large and

young, but alas! he never went to the war.

The relationships of the party are a little difficult. Honor, who certainly ought to know, claims to be the mother of Crackjacks, Sonia, and Cuthbert. Mary is, I suppose, their Honorary Aunt. Crackjacks was born when his mother was about seventeen months old. A more serious complication is that Crackjacks and Sonia are indubitably man and wife. He met her in the Rue de Rivoli while on his way to the South of France in the spring of 1920 and he married her in Paris, where he stayed during the return journey, on or about Easter Sunday, after a very brief courtship. Objections on the score of consanguinity are over-ruled on the acknowledged grounds that "dolls are different."

The male parentage of the three youngsters is wrapped in mystery. The only clue is afforded by an enquiry made during the war, which elicited the reply, "I'm not quite sure, but I say he's at the front." At the best, however, this can only throw light on

the ancestry of Crackjacks, and the total absence of any general family resemblance, particularly as regards Cuthbert, has given rise to queries by various suspicious individuals.

The author has no need to introduce himself, and does not share the stigma attaching to Cuthbert. His work with the flying corps is well known. Like a gentleman in an old ballad, he was then recognised as "Tender and true." As to his mode of life, he is not disreputably fast. At the same time, he is capable of rising to great heights very rapidly, and with no apparent effort. However, it is of his beliefs, not of himself, that he would speak.

The average active child is not so very fond of motoring. It involves too much sitting down; too many requests not to fidget. Generally speaking, it shares with the detested "walk" the drawback of being not much more than a long way of getting to the place you are in already. As the poet once sang:

"It makes me wild, when I go out,
There's nowhere to come but back."

Children cannot as a rule feed on beautiful scenery. Ask the average child whether he, or she, would rather occupy a comfortable seat and look at the view, or sit on the floor-boards, out of sight of everything, and eat chocolates, and I will give you ten to one that I can guess the answer. Scenery, then, is not in itself sufficient to make a motor trip enjoyable to them. They are, however, intensely interested in people that seem real to them. More often than not,



Professor R.F.C. Crossley and his class.
From left to right: Mary, Crackjacks,
Sonia, Cuthbert and Honor.

MAKING A FRIEND OF AN ENEMY.

these are the heroes and heroines of fairy stories and legends. Actual historical characters seem unreal, and therefore uninteresting. The surroundings of an imaginary hero can be imagined and no one can criticise their accuracy. The real historical character only becomes real when he, or at least his surroundings, have been visualised.

Why do we all remember just where Harold was shot at the Battle of Hastings? Not because of what we have read, but because our history book had a picture—which we probably coloured for ourselves—showing the arrow accurately centred in his eye.

It is the trivial but human incident—Alfred and the Cakes, Canute getting his feet wet, and so on; or the scrap of human conversation—"Who will rid me of this turbulent priest?"—"Remove that bauble!"—and the like, that stick in our memory. What is wanted, then, is to make our characters human. The child cares nothing for the great law-maker as such. Kings, unless they were fighters, seem nonentities; Queens, no more than a list of names troublesome to remember. But turn them all into live men and women, and they grow interesting.

Once one has heard of the characters, their setting becomes attractive; once one knows the setting, the characters, when one reads of them again, live and breathe and are real people. This is at the bottom of my theory of motor-ing for children. The children have read of Magna Carta and found the subject excellently dull. I take them out through Staines and along the river road to Windsor. I stop to show them Magna Carta Island, where the charter was *not* signed; the meadows of Runnymede where it *was* signed. They can imagine John and his retinue, the Barons and their men. They can see the King coming along the road from Windsor. Perhaps the road looks a bit more modern than it should. But no matter, the

picture is a clear one, and next time that part of the history book is tackled it will have a new interest, and the salient facts will stick.

There is a pleasant feeling of superiority, too, as against the people who have *not* been there. To get this feeling is worth while. Therefore the trip is a treat to be looked forward to; not a boresome lesson, or even a mere waste of time. It makes one feel rather important to be at places mentioned in school books, to tread the same ground as Kings and Queens, to stand where great battles have been fought, or great treaties signed. It is something to be remembered and to be rather proud of as having been done in the holidays. And to be really effective on the subject one must remember *why* these places are important, *what* really happened at them, and so the history book gets referred to as a friend instead of an enemy.

And then to Windsor Castle, with its intimate memories of almost every Monarch from William the Conqueror downwards. How many of the people in our history books have looked out from the round tower, have worshipped in St. George's Chapel, have strolled on the terraces, and dined in the banqueting hall! What scores of foreign potentates have been received by England's Kings at the head of the Grand Staircase!

Here, on the landing, stands the armour of Henry VIII., bull-necked, bow-legged, and rotund—a magnified

edition of our old friend Crackjacks. There, in the Hall, are the names of the Knights of the Garter from earliest times, like the Honours Boards in the big schoolroom.

Now we run leisurely through the Great Park, and skirt the Home Park. We know the haunts of Herne the Hunter. Later we shall turn to Harrison Ainsworth, whose books perhaps seemed a little heavy until now, and make real friends with Anne Boleyn, Wyatt, Surrey, and the King's Jester.

And now we are passing the famous playing fields of Eton, and on our way back to London we may as well touch Harrow, and so make slight acquaintance, in one day, with the two most famous schools in the world. So we turn northward, past the famous beeches of Burnham and choose the road through Chalfont St. Giles. Here we stop for a glance at Milton's Cottage, and the memorising of difficult stanzas of "Paradise Lost" will be a rather less gloomy job now that we have seen the poet at work in his own home.

Unless we fear the confusion that comes of seeing too much too quickly, we may have brought Hampton Court into our outward journey. If so, by night-time we shall feel that we know old Henry and his wives really well. Perhaps we sympathise with Wolsey; perhaps we think it served him right, but either way he has become something more than one of a long list of entirely dull statesmen, or the perpetrator—with Shakespeare's assistance—of speeches much too long and prolific of good advice.

But enough, for the present, of these wanderings. My readers, I fear, may be over-tired of me, but I will undertake that the children have had a great day—a day they will remember—a day that will lighten the tedium of many future days spent for the most part in the classroom or the study. Their grown-up companions have, perhaps, had enough and to spare. But it was worth while.



Windsor Castle from across the Home Park. Cuthbert is particularly interested; he "sits up and takes notice."

THE REDUCTION OF WEIGHT.

THE END OF WATER COOLING?

By W. Harold Johnson.

Some interesting points in the evolution of an oil-cooled Engine.

I AM not an alarmist nor even a fatuous optimist, but, really, recent developments do tempt one, metaphorically speaking, mentally to look round the corners; and if in this crooked, narrow lane of automobile developments, with its many cross-roads and side turnings, we do look round a few corners, what do we see? Well, we see all sorts of things. We see that some of the cross-roads are cul-de-sacs which, beginning with a very promising and enticing entry labelled Gearboxless Lane or Puncture Proof Street, have disappointing terminations and leave us, after our careful and sometimes expensive explorations, with nothing more than a sense of disappointment and perhaps annoyance in our minds. But ever since the end of the war there have been continual openings of new roads, which by different means have led to the village called Reduction in Weight, a clumsy name for a village perhaps, but one cannot indulge in metaphors and maintain classic conciseness at the same time.

Reduction in weight is being obtained by many means, but before saying anything about them perhaps I ought to point out what I mean by reduction in weight. The small car is not necessarily a light car, although advertisements and many other subtle methods adopted by enterprising manufacturers might lead us to think that the two terms are synonyms. I take it that a light car is a car with a high-power output in relation to its running weight. I would like to mention one striking example that I have in mind, but forebear from doing so because dozens and dozens of other makers will come along with bad tempers, facts and figures to demonstrate that their car is even more



The exhaust side of the oil-cooled Belsize engine.

deserving of the title of light car than the one I venture to publicise in print. But it is safe to say that this particular car and perhaps one or two others have an engine that gives off about 4 h.p. for every cwt. in the weight of the complete car, which is perhaps in the neighbourhood of one ton. Still, this is by the way. Now, what are the chief steps that are being taken to reduce the weight or the weight to power ratio of a car?

The first is, improvement in the efficiency of the engine by which a power unit that theoretically should give only 10 h.p. and may be fitted into a chassis intended for an engine of this type actually gives 15, 20 or even 30 h.p. But the weight of engines themselves is also being reduced, the most striking method, perhaps, being by the total abolition of water-cooling. The air-cooled car is not an entirely new thing, but it is

only since the war that it has attained real commercial success and it is only within the last few months that real proof has become available that the air-cooled engine has overcome the prejudice that undoubtedly existed against it in many motoring circles.

What, then, does an engine lose when its radiator, cylinder jackets and the water are abolished? It is impossible to put down the saving in weight in figures because the size of the radiator and all connected with it obviously depends entirely on the size of the engine, but I suppose it will not be denied that the proportion of the total engine weight made up by radiator, cylinder jackets and water contained therein is quite considerable.

Now, what does this water and the system in which it works do? Cool the engine, you will say, and it *does*, but to what extent. It may come as

a surprise to some of my readers to hear that the cooling water only accounts for about 25 per cent. of the total cooling of the engine, the other 75 per cent. is accounted for chiefly by the lubricating oil which circulates throughout the engine and is in turn cooled by the crankcase and by waste through the exhaust.

Now, if the water-cooling system be abolished and we get an air-cooled car, is it reasonable to expect that 25 per cent. of the cooling previously effected by the water is satisfactorily effected by any other means? Facts are better than speculations, and it is a fact that the cylinder temperature of the normal efficiency air-cooled engine is often lower than that of the corresponding water-cooled engine. If you ask why or seek the explanation it can be arrived at through a maze of patient technical investigation, and I will do no more than indicate one or

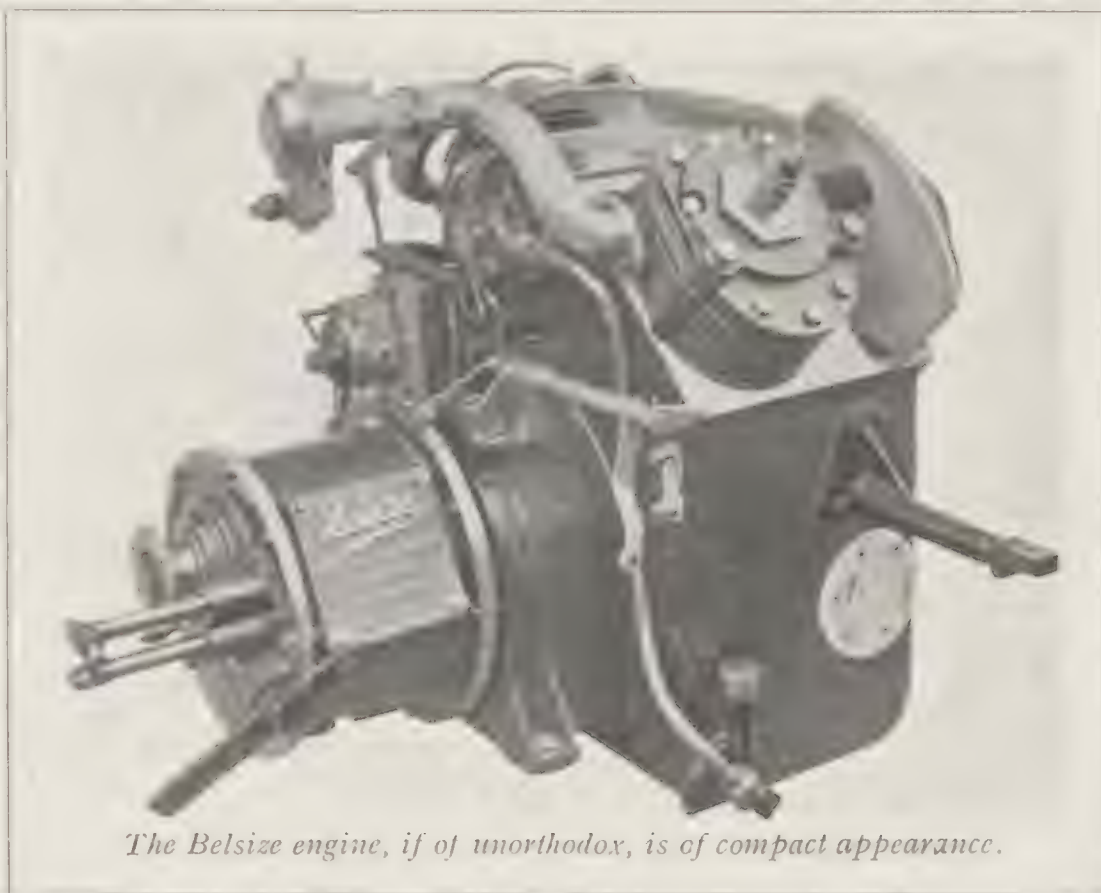
A SECONDARY FUNCTION OF OIL.

two facts that are strictly germane to the matter.

The first may be seen by anyone who cares to take the trouble to watch a saucepan filled with cold water and placed upon a fire. The sides of the saucepan soon become covered by bubbles of air which effectively insulate the water from the heated sides, and for the water to do its work properly, whether cooling in a motor-car engine or boiling in a saucepan, it needs to be swept over the heated surface so that it may extract its heat, in the case of the engine, to be dissipated through radiator and in the case of the saucepan to be retained and cause boiling. The next fact is, the ordinary side-by-side valve-car engine contains in its cylinder casting many pockets which have a doubly injurious effect. In the first place they militate against the circulation of the water and act as miniature boilers, becoming filled with steam that may in certain circumstances attain quite high temperatures. Thus you will have one part of your cylinder wall surrounded by almost super-heated steam, while a neighbouring part will be in contact with relatively cold water. The effect of such conditions on any metallic parts is too obvious to need comment. Incidentally, it is because of the superior cooling that it ensures that many designers are concentrating their attention on the overhead valve engine, for the gain arising from a symmetrically-shaped cylinder and water-barrel is probably just as great or even greater than that from a symmetrically-shaped combustion head, although we hear much more about the latter.

It may come as a considerable surprise to many readers to hear that the most important and the greatest part of the cooling of an internal combustion engine has always been effected

by the lubricating oil. One recalls that in early days the air-cooled engine was referred to disparagingly as an oil-cooled engine, but, as a matter of fact, the intending disparagement was a mere statement of fact that applies in every engine fitted to a car or motorcycle. It is only recently that the real importance of the lubricating oil as a cooling medium has been adequately realised and some of the almost



The Belsize engine, if of unorthodox, is of compact appearance.

incredible power outputs that have been obtained from miniature engines and racing engines of all sizes is due in no small measure to particular recognition of this fact.

Some races last year were won by cars that had no water in their radiators, and the engines of these cars were all designed for securing an exceptionally large crankcase area in proportion to the cylinder volume. If you examine a standard and a sports engine turned out by a respectable firm of engine manufacturers you will find that in all cases the sump acting as an oil reservoir is larger in the sports engine than it is in the standard, and the rate of oil circulated throughout the engine is very much increased. Why is this?

According to many scientific investigators in the problem of lubrication the quantity of oil that is present does

not matter in the slightest and the lubrication is performed just as efficiently by a minute quantity of oil as by flooding the working parts in lubricant. This, I think, is a fairly recent discovery that may be taken as proved and accepted, but, nevertheless, practical experience demonstrates that if a hot-stuff engine is not given more rapid and more generous lubrication than a comparatively soft and woolly engine of similar general design disaster will follow. And in the case of those cars of which the lubrication may be regulated by hand, what driver does not give more oil the faster he travels? On one old and highly-esteemed big car there has always been provision for automatically increasing the supply of oil with the opening of the throttle.

I hope I am not getting tedious, but I do want to emphasise as much as possible the fact that the lubricating oil of an engine has two distinct functions to satisfy: besides merely lubricating it is responsible for the cooling. I could adduce many more instances, facts and theories to illustrate my point but do not want to elaborate unnecessarily; but there is one striking illustration that must not be overlooked. During the war a well-known designer of air-cooled engines—to wit, Mr. Granville Bradshaw—was experimenting with miniature wireless and lighting equipments of which the power unit was a "flat twin" air-cooled engine. Originally these power units were cooled by a fan which directed a stream of air on to the crankcase, and a characteristic of these engines was their high-power output and the way in which they could be run under full load without decrease in power output. But it was surely a natural step for the designer to experiment with the diversion of the cooling stream of

FACTS AND FIGURES.

from the crankcase to the cylinders. As soon as he did this the maximum power output of the engine fell off and the staying power of the engine was practically non-existent. The only possible explanation lay in the fact that whereas previously the lubricating oil had been cooled now, after collecting heat from the piston, it was incapable of dissipating it because the crankcase walls were not kept cool.

From the foregoing facts has been evolved the first engine that deliberately relies on oil-cooling. Mr. Bradshaw has proceeded on the lines that if the oil was circulated with sufficient rapidity, was present in sufficient quantities, and was sufficiently well cooled it will never have time to attain unduly high temperatures, and therefore it will keep down every working part of the engine to a comfortably low temperature.

The lubricating oil is the simplest and possibly, also, the most efficient means of cooling the piston, and piston cooling is a consideration of vital importance, for the piston is subject to all the heat of the explosion. In the ordinary water-cooled engine it is effectively insulated from the cooled cylinder walls by a film of oil, and the lubricating oil that reaches it

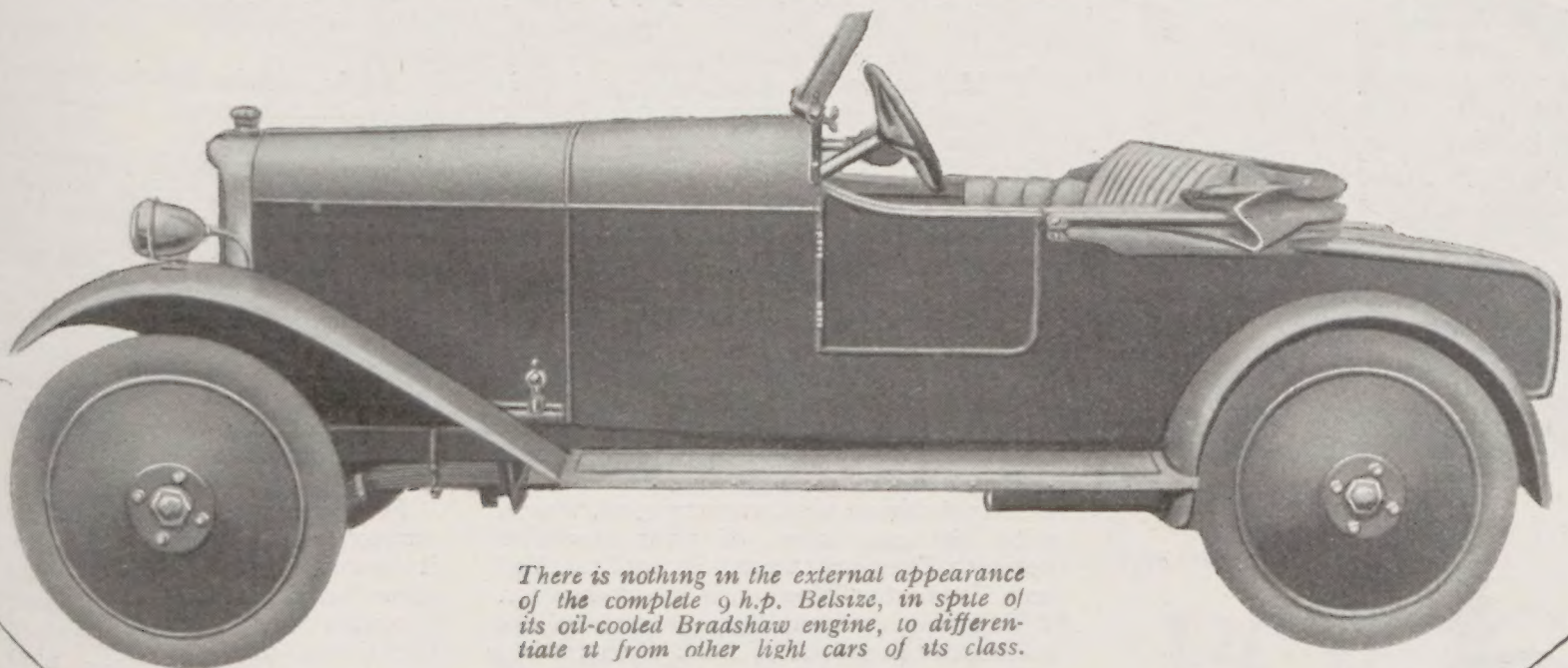
is not circulated in sufficient quantity to keep it cool, so that it is burnt on the piston, which soon becomes discoloured and finally carbonised with its rings gummed up. It is common to hear that a badly carbonised piston is due to the fact that the engine is given too much oil. When the quantity of oil circulated is measured by standards in common use this is true enough, but as a matter of fact the reason that the piston gets carbonised is really because it never gets enough oil to keep it cooled. Just for a moment think of the elaborate precautions that are taken for water-cooling the pistons in big Diesel engines as fitted to motor ships.

And so, working along lines that are obvious when they are pointed out but have never previously been followed or even recognised, Mr. Bradshaw constructed an engine that was entirely oil-cooled.

In essentials, it consists of an engine of more or less conventional design as regards the position of the side-by-side valves, two cylinders set at an angle of 90°, ignition by high tension magneto and carburation by an ordinary carburetter, but quite unconventional in that the cylinders, like the crankshaft, are in the crankcase. The crankcase is thus very much larger, in fact,

enormously larger, than the crankcase of an engine of similar cubic capacity has ever been before. It contains a much larger quantity of oil than is normally carried in an engine of similar horse-power, and this oil is circulated at a very rapid rate, at the rate, in fact, of one gallon per minute. Surrounding all working and all heated parts continually, the quantity and the rate of the circulation of the oil are sufficient to keep these always at a very low temperature, comparatively speaking, of course. The oil itself is kept cool by the large area of the crankcase walls over which it has to play, and these in their turn are cooled by a continual blast of air generated by vanes incorporated in the flywheel set in front of the engine.

Far from being excessive the oil consumption is much less than with an engine of ordinary type, over 2,000 m.p.g. being common. The fuel consumption is low, but this, of course, depends not merely on the engine but on the car to which it is fitted and the load which it has to carry. In the case of the Belsize car 45 m.p.g. is guaranteed. As regards power output this is extremely high for the capacity of the engine, for with a nominal rating of 9 h.p. no less than 30 b.h.p. is obtained.



There is nothing in the external appearance of the complete 9 h.p. Belsize, in spite of its oil-cooled Bradshaw engine, to differentiate it from other light cars of its class.

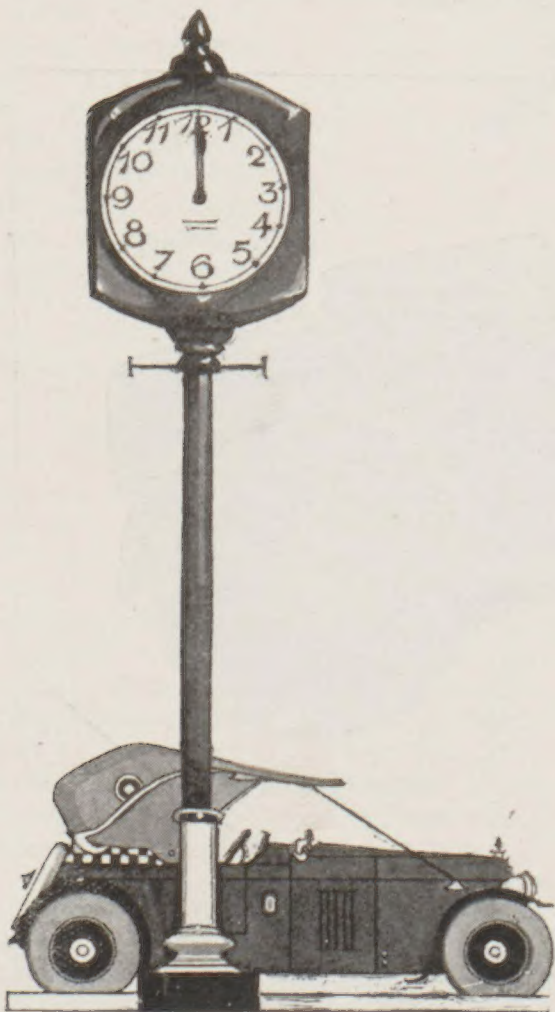
W H A T ' S O N I N F E B R U A R Y ?

Lighting-up time for London: February 1st, 5.16 p.m.; March 1st, 6.07 p.m.

1. W. Pheasant and Partridge Season Closes.
Hockey: Cambridge University v. R. Navy.
2. Th. Salmon Char and Trout Fishing Opens.
3. F. Racing: Sandown Park.
4. S. Rugby: R. Navy v. R.A.F., at Queen's Club.
North of Thames Cross-country Championship.
6. M. Racing: Warwick.
7. T. Racing: Warwick.
8. W. Racing: Gatwick.
Crust's Dog Show.
9. Th. Racing: Gatwick.
Crust's Dog Show.
10. F. Racing: Hurst Park.
11. S. Midland Light Car Trial.

11. S. South of Thames Cross-country Championship.
Rugby: Ireland v. England, at Dublin.
13. M. Racing: Birmingham.
14. T. Racing: Birmingham.
15. W. Racing: Windsor.
Coursing: Waterloo Cup.
16. Th. Racing: Windsor.
Coursing: Waterloo Cup.
1st Carnival at Nice.
17. F. Racing: Lingfield.
Coursing: Waterloo Cup Final.
18. S. Essex Motor Club One-day Trial.
Hockey: Wales v. Scotland; Midland v. North.
F.A. Cup—3rd Round.
20. M. Racing: Shirley and Plumpton.

21. T. Shire Horse Show, Royal Agricultural Hall.
22. W. Racing: Newbury.
Hockey: Oxford v. Cambridge.
23. Th. 1st Battle of Flowers at Nice.
24. F. Racing: Manchester.
25. S. Colmore Cup.
Rugby: Scotland v. Ireland; England v. France, at Twickenham.
Cross-country: Southern, Midland and Northern Counties Champ'ship.
26. Sun. 2nd Carnival at Nice.
27. M. Racing: Leicester.
28. T. Princess Mary's Wedding.
Racing: Leicester.
Assoc. Football: France v. England.
Hunters Show, Royal Agricultural Hall.
3rd Carnival at Nice.



THE STATE OF THE ROADS.

THE following road information is compiled from reports received by the Automobile Association and Motor Union:—

The Aylesbury road is in fairly good condition. Repairs to High Street, Berkhamstead are in progress, half width only available.

The surface of Bath road, except for a few poor stretches between Colnbrook and Taplow, is good to Hungerford.

The Brighton road, on which the surface is generally fair, is being repaired at Banstead, Crawley, Bolney and Salford.

Road widening operations are in hand at Dunstable on the Coventry road, which, with the exceptions of poor stretches between Fenny Stratford-Stony Stratford and Towcester-Weedon, is in good order.

Full width remetalling in hand on the Eastbourne road, S. of East Grinstead at Wych Cross and two miles S. of Uckfield.

The Folkestone road is free from obstructions, and is in fairly good condition.

From London to Stamford, the Great North Road is generally good, caution being advised through Buckden. Care necessary for one mile N. and S. of Alconbury.

Caution advised through Robertsbridge on the Hastings road, the surface of which is otherwise fair.

The Oxford road is generally fair after Uxbridge, but repairs are in hand at Wycombe Marsh and Stokenchurch. Care advised at Aston Rowant and Dashwoods Hills.

The Portsmouth road from Esher to Cosham is clear and good. Repairs are in hand between Cosham and Horndean (watch for A.A. warning flag). Best route Guildford-Horsham, turn left after crossing Shalford Bridge, and proceed via Womersley and Cranleigh.

From Staines to Basingstoke the Southampton road is good; after which point it becomes fair. Repairs are in hand three miles S. of Basingstoke and at Chandlersford. Care is necessary between Lyndhurst and Christchurch (huntsmen crossing roads). Caution also advised through New Forest (straying cattle).

Cables are being laid through Micklem on the Worthing road. Remetalling at Capel, and between Buckbarn and Henfield.

The Truro-Launceston road, which is poor to Fraddon, then fair, is being repaired in several places on the moor.

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